THE BUILDER

Incorporating ARCHITECTURE & THE BRITISH ARCHITECT

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THIS WEEK'S NEWS

MR. BASIL SPENCE, OBE, ARA, ARSA, has been appointed Planning Consultant to the University of Edinburgh. p. 793

MR. PETER SHEPHEARD, BArch, ARIBA, AMTPI, AILA, has been elected president of the Architectural Association. p. 793

THE COST OF BUILDING CHART, which was first prepared in 1952 and reprinted in 1953, has now been brought up to date to include current materials prices and recent wage increases. p. 795

REPRODUCTION of a selection of some of the architectural exhibits at the Royal Academy Summer Exhibition, 1954, begins on p. 797

WORK UNDERTAKEN by a study group of the RICS on a new approach to single price-rate approximate estimating, was outlined at a recent general meeting of the Institution by Mr. W. James, hon. secretary of the Quantity Surveyors' Committee. Extracts from his paper are given on p. 811

IN REPLY to a question in the House of Commons on April 29, Mr. Harold Macmillan said that of the 1,336 local authorities whose old building by-laws expired this year, 1,321 had adopted by-laws based on the model issued 12 months ago. p. 820

FIRE PREVENTION in temporary houses is the subject of a circular, just issued by the Ministry of Housing and Local Government, which recommends that inspections and tests of electrical installations should be made at regular intervals. p. 820

THE GOVERNMENT'S new plans for guaranteeing loans for the building of new houses and reconditioning of old property were outlined on Tuesday. p. 827

SCHOOL STANDARDS AND COSTS

DETAILS of the Ministry of Education's revised Regulations for School Building Standards and Costs were summarised in our last week's issue, and it is of course purely a coincidence that these should have been issued the day after the debate in the House of Commons when the Opposition pointed out the fact, which the Parliamentary Secretary did not deny, that in the past three years the number of classes in this country with more than 40 pupils had increased by over 6,000 and that there were now two million children suffering from this obvious handicap.

A very trenchant call was made for more rapid school building, coupled with the encouragement for more children to stay at school until they were eighteen, and the rather startling statement, which again was not denied, was made that, making allowance for the changed value of money we are spending no more today in education than in 1938.

Looked at in the light of this information how do the new regulations fit in? We cannot help feeling that everyone who has a detailed knowledge and experience of educational building must deeply regret that, for the most part, the revisions will tend to lower rather than improve the quality of the schools which are to be built in the coming years—a condition which frankly has not been helped by the Chancellor of the Exchequer reaping purchase tax on a number of materials which are used in school construction and furnishing.

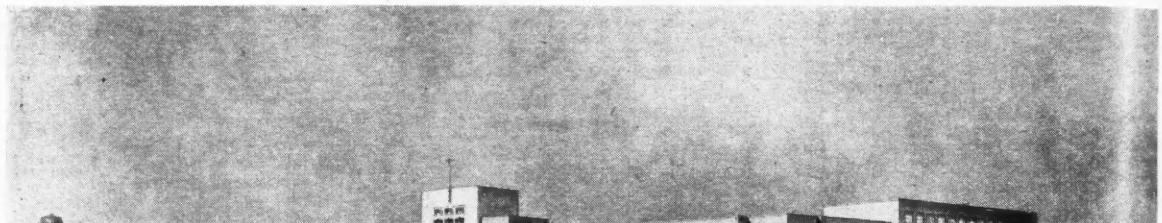
On the other hand any move by the Minister to remove certain anomalies which have become apparent with increasing experience is worthwhile, and any slight reduction in the requirements of items which can be changed without abandoning the educational standards cannot be criticised. We are sure that the Minister would argue that the whole of the regulations are minima standards, and provided that the Authority include the requisite number of coat hooks, lavatory basins, etc., the required floor area of classrooms and the like, they can make any modifications in overall planning which would allow them to exceed these minima. Since, however, for many years minima have been regarded as maxima, is it really satisfactory even to suggest that a hall is no longer to be provided in every Infants' School? Surely in every one the group activity—ranging from the elemental morning assembly with its informal religious background to such diverse activities as percussion bands, dancing, the parents' visits and the dozen and one activities—will be sadly changed by the omission of the unit which has been regarded by the teachers as the centre of all other activities.

It is surprising, in the light of many published plans, that the Minister has not felt it possible to accept the fact that many schemes do not even adopt the spirit of the daylight factor, let alone comply with the letter of the regulations. We are sure all architects would welcome some explanation and a review by a group of specialists, particularly in ophthalmics, since compliance with the regulations does considerably increase not only the cost of building but subsequent maintenance and heating.

Whilst we fully appreciate that the "palmy" days of educational building of the immediate postwar period are no more, we feel the Minister should bear in mind that more and more building, of all types, is being carried out on land which is economically unsuited and only used because it is no use for agricultural purposes, and generally of low bearing capacity, badly drained and often with difficulties of access and levels, and we wonder if the time has not arrived for a rather more realistic approach to the method of computing cost per place, in order to avoid the battle and delay that arises in agreeing "additional costs"?

In some areas of the country where the programme and supply of labour and materials is not so difficult they seem to be able to comply with the cost per place, but the revised regulations do not bring any joy to the architect working in London and most of the Home Counties, and of course they make no allowance for the recent increase in wages.

We are promised a revision of Building Bulletin No. 2A, and we look forward to seeing this in the hope that it may give some of the answers to the problems of the Secondary School, but we would earnestly suggest that the time has now arrived when the present limits of cost are unrealistic in many areas and we have no doubt that this information can be supported by the final accounts of many completed schools now in the Ministry's hands.



THE UNIVERSITY OF LEEDS : A drawing of the proposed new building which will house the departments of Engineering (Civil, Mechanical, Electrical, and Chemical) as well as the departments of Coal Gas and Fuel Industries with Metallurgy and Ceramics at the University of Leeds, which last week celebrated its jubilee. The new block will replace buildings erected in 1886. *The architect is Dr. T. A. Lodge, OBE, DLitt (Leeds), FRIBA, of the firm of Lanchester and Lodge.*

NOTES & NEWS

THE RA BANQUET

THE speeches at the Royal Academy's annual banquet last week, though perhaps not quite so lively as on one or two occasions since the war, were nevertheless not to be missed, and even via the medium of the radio some of the atmosphere surrounding this important occasion was well conveyed.

Sir Winston Churchill, with his genius for putting into words what other mortals but dimly apprehend, referring to the horrors of "unconventional" warfare—the new euphemism for the use of atomic weapons—said we might well ask ourselves whether we should go on with the routines, ceremonies and festivities of our daily round when dangers are growing which threaten the very life of the human race.

The answer the Prime Minister gave to the question was clearly right, namely, "that the more the human mind is enriched and occupied and the conditions of our life here are improved and our capacities enriched, the greater is the chance that unconventional weapons, as these hideous apparitions are called, will lead not to general annihilation but to the outlawry of war which generation after generation has hitherto sought in vain."

It might be, he added, that our peril will prove our salvation. "If so, this will depend upon a new elevation of the mind of man which will render him worthy of the secrets he has wrested from nature. In this transfiguration the arts have a noble and vital part to play."

WARWICK HOUSING

WARWICK TOWN COUNCIL decided on April 28 to appoint a consulting architect to advise on the plan for the £1m. Percy Housing Estate. The Council will now ask the Royal Institute of British Architects and other professional bodies to submit the names of appropriate architects of experience. The suggestion that the council might take this course was made some months ago by the Warwick Society which is concerned that the future development of the town should be in keeping with Warwick's historic character.

Supporting an objection to the proposal, Alderman W. V. Collier said he did not see why advice could not be sought from the Warwickshire Advisory Panel of Architects which was complaining of the small use made of its services. The Mayor said it was not the business of the Warwickshire Advisory Panel to help with estates of this kind. The amount of the architect's fees would be infinitesimal in relation to the cost of the whole estate he said, and no slight on the town's own officials was implied.

COMING EVENTS

SATURDAY, MAY 8

INSTITUTE OF BRITISH PHOTOGRAPHERS.—Exhibition of photographs on science, art, industry and commerce. RBA Gallery, Suffolk-street, SW1. Continuing until June 1. Monday to Thursday, 10-5. Friday and Saturday, 10-7.

RICS.—"Geophysical Prospecting with Gravimeter," by Professor J. T. Whetton, DSO, OBE, ARICS. Leeds University. 10.30 a.m.

MONDAY, MAY 10

RIBA LIBRARY GROUP.—Identification of unknown drawings in the possession of the library. 66, Portland-place, W1. 6 p.m.

FEDERATION OF PAINTING CONTRACTORS.—Luncheon and AGM. Dorchester Hotel, W1. 1 p.m.

TUESDAY, MAY 11

FEDERATION OF MASTER BUILDERS (LONDON REGION).—Group 6. Mr. A. G. Elliott on "Workability Aids." "Cornet of Horse," Lavender Hill, SW11. 7 p.m.

WEDNESDAY, MAY 12

ROYAL SOCIETY OF ARTS.—"The Society's House: An Architectural Study," by Mr. John Summerson, CBE, FSA, ARIBA. RSA, John Adam-street, WC2. 2.30 p.m.

LONDON SOCIETY.—"The Building and Sculpture of Henry VII's Chapel, Westminster Abbey," by Mr. Laurence E. Tanner, CVO. Royal Society of Arts, John Adam-street, WC2. 5.30 p.m.

FEDERATION OF MASTER BUILDERS (LONDON REGION).—Group 3. "New Housing and Repairs Bill," by Mr. A. S. Charlton, CBE, Berkeley Court Restaurant, 187, Baker-street, W1. 6.30 p.m.

ROYAL SANITARY INSTITUTE AND DSIR.—Opening by Sir David Eccles, Minister of Works, of dry rot and woodworm exhibition. 90, Buckingham Palace-road, SW1. 12.15 p.m.

THURSDAY, MAY 13

RICS.—AGM and talk by Mr. Anthony Clapham, FRICS, on "The Future of Private Practice." 12, Great George-street, SW1. 6.15 p.m.

FRIDAY, MAY 14

ROYAL SOCIETY FOR THE PREVENTION OF ACCIDENTS.—National industrial safety conference. Spa Theatre, Scarborough. Continuing until May 16.

FEDERATION OF MASTER BUILDERS (LONDON REGION).—Group 1. "London Building Acts and Bye-laws," by Mr. David Whyte. Horseshoe Hotel, Tottenham Court-road, W1. 6.30 p.m.

MR. SIDNEY H. LOWETH

BEFORE the recent retirement of Mr. Sidney H. Loweth, FSA, FRIBA, from the appointment of Kent County Architect, the Kent County Council passed a resolution recording its appreciation of his services during his 24 years with the Council and assuring him "that he carries with him into a well-deserved retirement the good wishes of the Members."

Shortly after his retirement, the Buildings Committee of the County Council presented Mr. Loweth with a silver salver as a mark of their esteem and appreciation. The presentation was made by Alderman B. J. Pearson, JP, Chairman of the Committee, who said that, despite the many difficulties to be overcome during the post-war period, a very big building programme had been carried out in Kent under Mr. Loweth's guidance and to everyone's satisfaction. Supporting Alderman Pearson, Sir Charles Tuff, DL, JP, vice-chairman of the committee, said that Mr. Loweth's work had been marked by his energy, his unbounded enthusiasm and his invariable courtesy to all the members of the committee with whom he had come into contact.

Members of Mr. Loweth's staff in the Buildings Department subscribed to present him with a pair of binoculars. The presentation was made by the Deputy County Architect, Mr. R. T. Green. A further presentation, on behalf of heads of county departments and other senior county officers, will be taking place shortly.

COVENTRY CATHEDRAL

THE FUTURE use of new sources of heat, such as nuclear fission, is envisaged by Mr. Basil Spence, OBE, ARA, FRIBA, the architect, in his plans for the reconstruction of Coventry Cathedral.

Speaking in London on April 28, Mr. Spence said that the heating system would at first be operated with oil but would be capable of conversion for use with any other form of fuel, including such sources of heat as nuclear fission.

He had been told by scientists associated with atomic research that isotopes with sufficient potential energy to heat a building of the size of the proposed cathedral for three years could be contained in a space about the size of that occupied by a salt cellar.

AN EDINBURGH APPOINTMENT

MR. BASIL SPENCE, OBE, ARA, ARSA, of 40, Moray-place, Edinburgh, has been appointed Planning Consultant to the University of Edinburgh.

SCHOOLS ARCHITECT

THE Iraq Ministry of Education invites applications for the appointment of architect for school buildings. The appointment carries a salary of between £1,200 and £1,800, according to qualifications and experience, and various additional allowances. Further details are given in our advertisement columns.

RIBA LIBRARY GROUP

THE next meeting of the RIBA Library Group, which is to be held on May 10, will be devoted to the identification of unknown drawings in the possession of the library.

POLISH ARCHITECTURE

AN EXHIBITION of Polish Architecture is to be shown at the RIBA from May 21 to June 4, and will be opened by the Polish Ambassador. Prepared by the Union of Polish Architects in 1952 and since brought up to date, the Exhibition tells the story of the post-war reconstruction work which has been accomplished in Poland, and part of the exhibition is devoted to an historical section.

ARCHITECTURAL PHOTOGRAPHY

THE 35th annual exhibition of the Institute of British Photographers, which opens on May 8, consists of 783 exhibits. Awards of merit in the architectural section go to Mr. John McCann (London) and Hylton Warner (Cardiff). The judges in this section were Miss M. Harker, Mr. Howard V. Lobb, FRIBA, and Mr. Sydney Newbery, PPIBP. The exhibition remains open at the RBA Gallery, Suffolk-street, Pall Mall East, SW1, until June 1 (10 a.m. to 5 p.m. Monday to Thursday; 10 a.m. to 7 p.m. Friday and Saturday).

AA PRESIDENT. Mr. Peter Shepheard, BArch, ARIBA, AMTPI, AILA, who has been elected President of the Architectural Association. He is 40.

"THE BUILDER"

Cost of Building Chart

CURRENT EDITION READY

THE Cost of Building Chart which Mr. H. J. Venning, FRICS, first prepared in 1952 *for "The Builder" and reprinted in* 1953, *has now been brought up to date to include current materials prices and the wages increases of* 1*d. per hour (granted as from February* 1) *and of* 1½*d. per hour awarded by the National Joint Council to take effect on May* 24.

The chart shows (1939 *being taken as datum at* 100) *that the level of building costs now stands at* 332, *a rise since January*, 1953, *of* 12 *points.*

The chart and accompanying table of wages increases and guarantees since 1939 *is being reprinted on light card. Copies may be ordered from the Publisher, "The Builder," The Builder House, Catherine-street, Aldwych, WC2, price* 1*s. each, plus* 3*d. postage for any number of copies up to* 12. *Orders for* 12 *or more charts will be sent post free. Cash should accompany orders.*

SYMPOSIUM ON CONCRETE

THE Cement and Concrete Association announce that owing to the demand for tickets for the symposium on mix design and quality control of concrete to be held from May 11 to 13, it has been found necessary to transfer the venue to the Empire Rooms, Tottenham Court-road, W1 (on the corner of University-street, near Warren-streen Station).

PROFESSIONAL ANNOUNCEMENTS

MR. JACK W. STOCKINGS, FRICS, Chartered Quantity Surveyor, Norwich, has opened a branch office at Bridge-street, Thetford (Tel. 2261). Mr. Stockings' name was unfortunately mis-spelt last week.

MR. BARRIE MEEKINS, ARICS, AIAS, AIArb, chartered quantity surveyor, has commenced in private practice, and has temporary offices with MESSRS. F. J. MEEKINS AND PARTNERS, quantity surveyors, at 20, Balcombe-street, Dorset-square, London.

MR. W. L. F. PIERCE, ARICS, chartered quantity surveyor, has moved to 43, Fore-street, Hertford, where he will be pleased to receive trade catalogues.

FROM "THE BUILDER" OF 1854

Saturday, May 6, 1854

BATHS.—Baths, both hot and cold, are still "*a luxury*" in our houses. How is this, when the most able men in the faculty pronounce them to be *necessary* for preserving health? The new disease of the kidneys, called *morbus brightii*, is believed by many to be caused by a want of the use of that necessary adjunct to a healthful home—a bath. I hope, among your other teachings, you will, from time to time, point out to those in whose power it is to preserve the health of her Majesty's subjects the absolute need there is to build a bath *in every house*. MEDICUS.

RIBA

Annual General Meeting

QUESTIONS as to when the report of the Architectural Education Joint Committee was to be published were asked at the annual general meeting of the Royal Institute of British Architects, on May 4, during a discussion on the annual report of the Council for 1953–1954.

The question was first raised by MR. HAROLD CONOLLY, when he opened the discussion on the Council's report. He asked if it would be possible to know if the report, when published, would be the one the Committee wrote. The subject was a very vexed one, and a very important one, and he reminded the Committee that there were 5,000 registered students. The longer it took to settle the question of architectural education the worse it might be for them, he said.

In endorsing Mr. Conolly's remarks, MR. THOMAS MITCHELL said he felt the problem was being dealt with in the worst "Government Department manner." Two further years had passed and there was still no report. There was a flood of post-war building coming and we did not know if we were educating our young architects in the right way, he said.

Several other members stressed the urgency of the matter and asked when the report was going to be published.

MR. ANTHONY M. CHITTY, in reply, said the questions seemed to deal with progress and publication. Of the first, he said he agreed the subject was a very interesting one, but it was also a very complicated one, and he could add nothing further to the report. The Committee had had 12 meetings in the last session and a progress report would be submitted to the Board of Architectural Education this month. There was no magic in this thing, he said. The present educational system had been in being for the past 100 years and the schools had come into being over the last 50 years.

INTERIM REPORT

Referring to the Board of Architectural Education and in particular to the Architectural Education Joint Committee, the annual report of the Council states:

An Interim Report was completed in May, 1953, dealing with the external and recognised internal examinations for Associateship, and proposing certain changes in the requirements. The Board considered these proposals at their meetings in June and October, 1953, and, on the recommendation of the Board, the Council reaffirmed that all candidates for Associateship should be required to pass examinations in uniform lists of subjects.

The Committee are now reviewing the syllabuses for the various examination subjects with a view to establishing an agreed minimum standard of knowledge and attainment to be required for Associate Membership; and at the same time they are preparing a second Report dealing with the remaining matters covered by the terms of reference.

The preparation of the required Advisory Memorandum on Architectural Education will be undertaken when the Board have considered the Committee's second report, and the revised examination requirements.

CORRESPONDENCE

PLUMBING PRECAUTIONS AGAINST FROST: A DISCLAIMER

To the Editor of *The Builder*

SIR,—Regarding Circular 34/54 issued by the Ministry of Housing and Local Government on April 12, and printed on page 729 of your issue of April 23, it is necessary to point out, in relation to the inclusion of a reference to this Institute in the last paragraph, that we have *not* been asked by the Minister to do all we can to improve the present position. On the contrary, we were asked by a senior official of the Ministry whether he could tell the Minister what this Institute could do to avoid a repetition of the great loss and inconvenience experienced this year.

Considering what we have done since 1933 in publishing and keeping up to date our Minimum Specifications for Plumbing Work, that question was just a little too ingenuous for us to fall for it and admit, by inference, that we were responsible for the damage caused. But when it transpired that the Ministry appeared to be entirely ignorant of all that we had done in association with the officers of the former Ministry of Health, and of the services which our representatives have rendered over many years when revisions of Model By-laws have been under consideration, then it could not be expected that we would rush to swallow that hook, line and sinker.

For some strange reason the Registered Housebuilders have been joined with us. We and they have co-operated in the past very closely, and in their specifications of minimum standards for their special registration they have substantially adopted ours.

When the Ministry can demonstrate that the plumber is free on public authorities' housing work to insist on adequate standards being specified and adequate planning being carried out, so that his pipes can be properly fixed, then we might consider shouldering some of the blame.

"I knew Landseer intimately, dear lady. I met him at a stag party."

Incidentally, it was only because of the action of this Institute that one of its members was enabled to instal the first "one-pipe" system of plumbing in London, that of the Cumberland Hotel. But in that case the architect had the foresight to co-operate when planning with his specialist and nominated plumbing sub-contractor.

We deliberately abstain from rushing into print when, during times of frost-burst, the popular Press plays its usual antics, but when a well-informed Department appears to follow suit then a protest has to be registered.

H. BLACKMAN [OBE, BSc],
Secretary, the Institute of Plumbers.

81, Gower-street, WC1.

QUALITY OF PLASTERING SAND

To the Editor of *The Builder*

SIR,—The members of my Association are viewing with grave concern, the increasing difficulty of obtaining plastering sand of a quality that is necessary for good-class work.

The essentials of a sand that is suitable for plastering are that it should be free from deleterious matter such as lime, clay, or soluble salts, and that it should be graded in accordance with BSS 1198 or 1199. The plastering contractor is seldom in a position to apply the tests that are laid down in the British Standard Specifications, and, even if he were, it would be hardly practicable to test every load of sand he received. The presence of lime, clay, etc., in undue proportions can be detected quite easily, but the plastering contractor has to trust the supplier so far as the question of correct grading and content of soluble impurities is concerned.

I think it would be safe to say that very little of the sand received by plastering contractors is of the correct grading; and yet, it is the essential of a good sand that the particles of the various sizes should be mixed in the proper proportions. We feel that some considerable improvement in the screening at the pits is necessary, in order to achieve the desired result. It may be, of course, that some of the best pits are now exhausted, but if this is so, it is all the more necessary for the suppliers to ensure that the sand they do deliver is up to standard. The plastering contractor is between two fires. On the one hand, the architect, quite rightly, insists that the materials shall conform to the appropriate British Standards Specification; on the other, he is faced with the "take it or leave it" attitude of many of the sand suppliers.

It is not surprising that certain of the newer lightweight aggregates are being used more and more for internal plastering. The production of these aggregates is usually scientifically controlled, and the grading can be depended upon. Although these lightweight aggregates are dearer than sand, they have compensating advantages in the field of thermal insulation that sand does not possess. It seems reasonable to expect that in course of time the cost of producing lightweight aggregates will be reduced and that the present disparity in price compared with sand will disappear.

A. L. DOWNER, President, London Master Plasterers' Association.

47, Bedford-square, WC1.

SCHOOL BUILDING

Minister Expects Early Decline in Overcrowding

"IF we can go on as we are doing, the position regarding overlarge classes should improve well before 1960," Miss FLORENCE HORSBRUGH, the Minister of Education, said at Bristol, on April 30, where she opened 13 new schools. Overcrowding would begin to decline in the primary schools after this summer, slowly at first, but more rapidly from the autumn of 1956 onwards.

Comparing the present-day position with that before the war, the Minister said that the proportion of primary school children in classes of over 40 was 41 per cent in 1953 as against 44 per cent in 1938, while the 1938 figure for classes of over 30 in secondary schools had been 62·7 per cent, compared with 57·7 per cent. And in 1953 there were 250,000 more children in primary schools than in 1938 and 500,000 more than in 1950. Similarly, for secondary schools there were in 1953 some 500,000 more children than in 1938 and 75,000 more than in 1950.

On school building, Miss Horsbrugh gave the following figures for the value of primary and secondary school contracts completed: 1951—£25·3m.; 1952—£35·1m.; 1953—£42·1m. The 1953 figure was the highest for any post-war year. The figures for new contracts approved had risen from £37·4m. in 1951 to £41·3m. in 1953. The annual school building programme of major projects (the value of new work to be started in each year) was now running at the rate of £45m. a year.

In the last four years more than 700,000 extra children had been accommodated. Enough places (180,000) were under construction to cope with the further increase of 80,000 in the number of under-elevens between now and its peak in 1956, and all new primary school building started in future would be on account of new housing development. In addition, the secondary school building programme had now reached a level which, if maintained, should provide for the accommodation of all the extra 700,000 senior children who were expected to enter the secondary schools by the end of 1960.

OBITUARY

EDGAR S. UNDERWOOD, FRIBA

WE REGRET to record the death, which took place on April 29, of Mr. Edgar Sefton Underwood, FRIBA. He was aged 91. Mr. Underwood was for many years surveyor to St. Mary-le-Bow Church, Cheapside, and other churches in the City of London. He was a member of the Court of Common Council, City of London, for 37 years, and a past-president of the Institute of Arbitrators.

GILBERT M. SIMPSON

WE record with regret the recent death, at the age of 85, of Mr. Gilbert Murray Simpson, who was architect and surveyor to Brighton education committee for 47 years. He retired in 1945. Mr. Simpson, who was a brother of the late Sir John Simpson, KBE, past-president RIBA, designed the Varndean schools.

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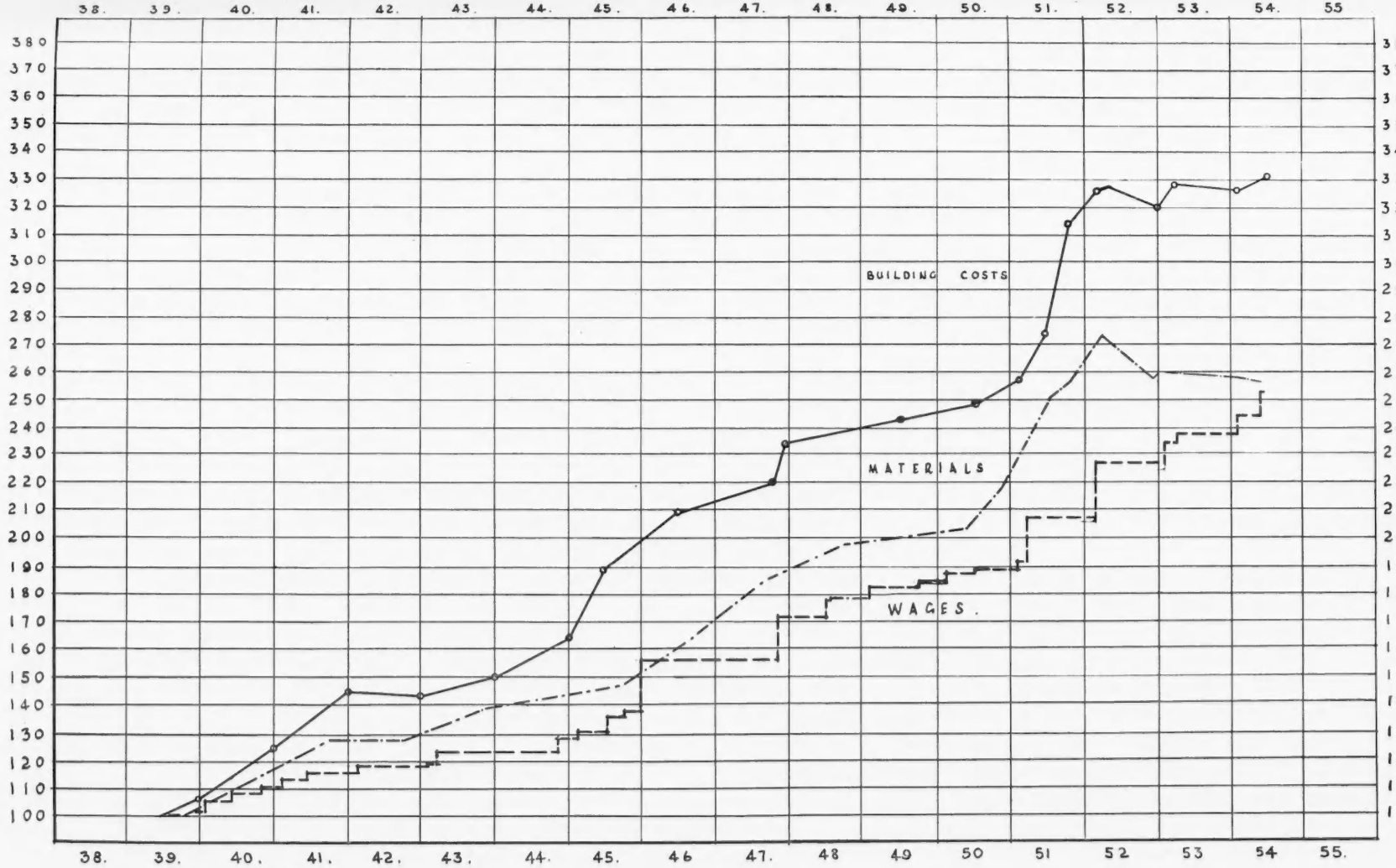


Prepared by H. J. Venning, FRICS, and copyrighted by "The Builder."

BUILDING COSTS, 1939-1954. Plotted above are the fluctuations in Wages, Materials and Building Costs over the years 1939 (Datum 100) to May, 1954. The Index stands at 332 as compared with 320 at January 1, 1953. The Wages increases of 1d. per hour under the sliding scale of February 1, 1954, and of 1½d. under the recent NJC award (to take effect on May 24) are taken into account. Overleaf will be found itemised the various wages and other increases since 1939.

"THE BUILDER" COST OF BUILDING CHART

(Copyright : "The Builder")

WAGES

Wages of one craftsman and one labourer (London rates) separately and conjointly with an allowance for emoluments such as the guaranteed week, holidays with pay and allowances under the working rules.

Date	*Craftsman Labourer*	*Conjointly*	*Pence*	*Percentage Allowance*	*Actual Cost in Pence*	*Index Figure*
June, 1939	1/9 + 1/3¾	3/0¾	36·75	+ 5	38·59	100
December, 1939	1/9½ + 1/4¼	3/1¾	37·75	,,	39·64	102·7
January, 1940	1/10 + 1/4¾	3/2¾	38·75	,,	40·69	105·4
June, 1940	1/10½ + 1/5¼	3/3¾	39·75	,,	41·75	108·2
September, 1940	1/11 + 1/5¾	3/4¾	40·75	,,	42·78	110·8
February, 1941	1/11½ + 1/6¼	3/5¾	41·75	,,	43·84	113·6
June, 1941	2/0 + 1/6¾	3/6¾	42·75	,,	44·89	116·3
February, 1942	2/0½ + 1/7¼	3/7¾	43·75	,,	45·94	119·05
February, 1943	Holiday Stamp	3/7¾	43·75	+5¼	46·04	119·3
April, 1943	2/1½ + 1/8	3/9½	45·5	,,	47·89	124·1
November, 1944	2/2½ + 1/8¾	3/11¼	47·25	,,	49·73	128·8
February, 1945	2/2½ + 1/9¼	3/11¾	47·75	,,	50·25	130·2
July, 1945	2/3½ + 1/10	4/1½	49·5	,,	52·09	135·0
October, 1945	Guaranteed Week	4/1½	49·5	+6½	52·72	136·6
January 1, 1946	2/7½ + 2/1¼	4/8¾	56·75	,,	60·44	156·6
Sept. 30, 1946	Increase H.I.	4/8¾	56·75	6¾	60·58	157·0
February, 1947	Travelling	4/8¾	56·75	7	60·72	157·3
September, 1947	Holiday Stamp	4/8¾	56·75	7¼	60·86	157·7
Nov. 16, 1947	2/10½ + 2/3¾	5/2¼	62·25	+7	66·61	172·6
July 5, 1948	Health Scheme	5/2¼	62·25	+10	68·48	177·4
July 11, 1948	2/11 + 2/4	5/3	63·0	,,	69·30	179·5
February 7, 1949	2/11½ + 2/4½	5/4	64·0	,,	70·4	182·4
October 3, 1949	2/11½ + 2/5	5/4½	64·5	,,	70·95	183·9
February 6, 1950	3/0 + 2/6	5/6	66·0	,,	72·6	188·1
July 3, 1950	3/0 + 2/6½	5/6½	66·5	,,	73·15	189·5
February 5, 1951	3/0½ + 2/7	5/7½	67·5	,,	74·25	192·4
March, 1951	3/3 + 2/9½	6/0½	72·5	,,	79·75	206·6
March 26, 1951	Holiday 3d.	6/0½	72·5	,,	79·75	206·6
April 2, 1951	Holiday 3d.	6/0½	72·5	,,	79·75	206·6
October 1, 1951	Increase Ins.	6/0½	72·5	,,	79·75	206·6
February 4, 1952	3/6 + 3/0½	6/6½	78·5	+10½	86·74	224·8
April 1, 1952	Holiday Stamp	—	78·5	10¾	86·9	225·3
October 6, 1952	Increase Insurance	—	78·5	11	87·13	225·8
February 2, 1953	3/8 + 3/2½	6/10½	82·5	10	90·75	235·2
April 1, 1953	Extra week's holiday	—	82·5	12	92·4	239·4
February 1, 1954	3/9 + 3/3½	7/0½	84·5	11¾	94·43	244·7
May 24, 1954	3/10½ + 3/5	7/3½	87·5	11½	97·56	252·8

The Royal Academy of Arts

THE SUMMER EXHIBITION, 1954

Reviewed by G. MAXWELL AYLWIN, FRIBA

YEAR by year the question poses itself, what the Summer Exhibition really stands for in the architectural world, and year by year new answers to an enigma present themselves. One thing it has never been is a show of successful competitors in a competition of quality, for quality, in itself, is not always a matter of public concern or interest, and some things which lack the finer points have to be included in a display of architecture to which a public hungry for the latest thing is to be admitted. Again, some excellent works will not fit in with the harmony of the average, while some indifferent works lend themselves naturally to the overall pattern. So we have come to accept the facts that inclusion in this most famous of architectural exhibitions is not the hallmark of quality and that rejection does not always signify inferiority.

One has come to regard the occasion as one in which a body of the most highly qualified architects selects and places before the public a cross-section of good, contemporary architecture with a fair balance between traditional quality and adventurous experiment, with, perhaps, some conservatism about the latter until the new idea has been tested and found not wanting. As such we have grown to respect the occasion and to treat it as one of great seriousness and importance.

A SURFEIT OF MEDIOCRITY

But what are we to think of it this year? For myself, in the many years I have had the pleasure of reviewing the Summer Exhibition, I can remember not one in which there has been such a surfeit of mediocrity relieved mainly by rank bad architecture. The few shining exceptions hang solitary as an oasis lies in the desert. What does it mean? Is it that our conception of the annual show as a fair sample of contemporary talent is correct, and that this is indeed the best that a sterile generation can offer? Or is it that the Hanging Committee, the skill and taste of which have been one of the features of the galleries for many years, has now so enjoyed its triumphs as to regard the walls primarily as a field in which to exercise its powers, each exhibit being merely a decorative panel, gaining its place according to whether size of frame and weight of draughtsmanship serves best the overall effect? This would be a verdict of exaggeration, of course, but I cannot believe either that many of these exhibits would have survived the test but for a fortuitous conformity to the required size and pattern, or that the few exhibits of real architectural quality were all that came up for judgment. I really think there is something in this suspicion, and if so it is time the Hanging Committee returned to its proper functions even if it loses a little symmetry in the process.

But let us turn to the few pleasant thoughts which the show enabled one to carry away. Of these the most exciting is that majestic perspective of Coventry Cathedral which Mr. Basil Spence presents, and which steals the show, even though it is tucked away round the corner in strange company (No. 1130). For several years we have been seeing the aesthetic development of this well-won competition scheme, first in the hard lines of orthography which competition conditions impose upon its adventurers, and later as an artist's dreams of things to come. I hope we shall be seeing more and more of it as ideas grow from colourful fancy to the facts of building, and I look forward to a series of working drawings in due course that will vie with that beautiful direct draughtsmanship in which Lutyens presented his Liverpool Metropolitan Cathedral masterpiece.

"A NOBLE MASS"

This drawing of Mr. Spence's, an impressive perspective of the cathedral from the North (or liturgical East), is a delight to see by its merits as a drawing, and further conveys certain reassurances to those who have wondered whether harmony could ever be reached between the ancient surroundings and this most adventurous of buildings. The drawing shows us old and new composed happily together, with the slender Gothic spire which defied Hitler not defying but welcoming the noble mass of stonework which there meets it.

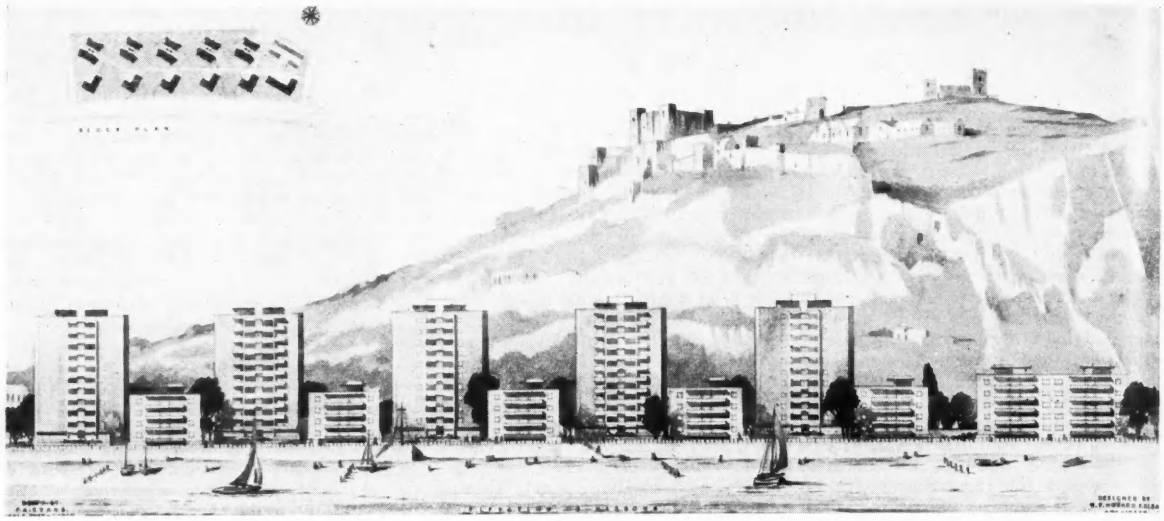
When we have had our feast of this highlight we are hard put to it to find anything of taste and quality within the sterile oceans which lap the walls with boredom. It is not that they are not there, but that whereas the Cathedral strikes the eye as a fanfare of trumpets hits the ear, the humbler tasks of the builder make a gentler visual appeal, more as the sound of sweet, low chords from the harp. We make our pilgrimages to the Cathedrals, but our lives are more often sweetened by the humbler architecture which chance sets in our road.

One exhibit that gave me particular pleasure was Mr. Louis de Soissons' delightful scheme of Flats and Maisonettes at Digswell (No. 1155) which Mr. John Stammers has drawn, evidently with great pleasure, in quiet tones and delicate draughtsmanship. This is clean sensible architecture, softening the austerities of the times with little touches of detail such as those with which the Georgian architects humanised the severities of orderly brickwork. This is the sort of architecture which moves forward cautiously but perceptibly, and is as refreshing as a draught of cool water on a sultry day.

On equally modest, healthy lines is the group of eight houses at Ascot for the Commissioners of Crown Lands, shown by Mr. Clifford Culpin (No. 1182), with a tasteful perspective in colour by Mr. Lawrence Wright. Here is a block of building in a form asking

Drawn by Lawrence Wright.

ST. COLUMBA'S CHURCH OF SCOTLAND. Sir Edward Maufe, RA, Architect.



Drawn by F. A. Evans.

DESIGN FOR REDEVELOPMENT OF MARINE PARADE, DOVER. By W. F. Howard, FRIBA.

for and receiving a simple roof, with well studied proportions and details undisturbed by affectations whether of over-elaboration or over-simplification. The result is almost inevitable—a block of buildings fit for a queen to own.

A third refreshing draught is supplied by the Cheshire Foundation Home at Liss, by Messrs. W. H. Watkins, Gray and Partners. This is again an example of unaffected domestic architecture, with roofs arriving naturally out of a well-planned shape, in the way the good designer contrives if only he will allow himself to do so in these sophisticated times. (No. 1125).

ESSAYS IN MODERNITY

Of some merit, though not quite in the same class, we find a pleasant little essay in the modern vein, in the House at

Drawn by F. A. Evans.

SYLVAN HILL HOUSING SCHEME, CROYDON.
Leonard C. Holbrook, ARIBA, Architect.

Drawn by Lawrence Wright.

BLOCK OF 44 FLATS, SNOW HILL, BATH.
Terence W. Snailum, AADip., FRIBA, Architect.

Reigate by Mr. John Stammers (No. 1144); the frank and appropriate façade of Shop Premises at Bristol by Colin St. C. Oakes, drawn by Mr. J. D. M. Harvey (No. 1166); a pleasant Regency reminiscence by Messrs. Robert Atkinson and Partners in the shape of a Public House at Brighton (No. 1167); Offices in Savile Row, by Wm. J. Biggs (No. 1176), a sensible block of brick and stone building; Fourah Bay College, Sierra Leone, by Mr. Graham Dawbarn, a very interesting group of tropical buildings nicely rendered in colour by Mr. J. D. M. Harvey (No. 1183); and Marine Parade, Dover, by Mr. W. F. Howard, a group of stark modernistic flats which yet somehow look as if they would stand appropriately in front of the chalk cliff background which the attractive perspective applies to them (No. 1190).

There are several safe traditional works, some of them giving the uncomfortable impression of standing still in a progressive world, though most of them are obviously competent designs. There is another of Mr. Hepworth's works in the War Cemeteries, War Memorial to the Missing at Dunkerque (No. 1133), designed and drawn in his own effortless style; a Georgian-style house at Shackleford by the same architect (No. 1161); the imposing classicism of The Clothworkers' Hall by Messrs. Whinney, Son and Austen Hall (No. 1129); and the Entrance Portico at Fife, by Mr. Oliver Hill (No. 1169).

ST. COLUMBA'S

Sir Edward Maufe's St. Columba's Church of Scotland has the inevitable quality of his work, without, I feel, quite the degree of inspiration which brought him to the fore at Guildford (No. 1162).

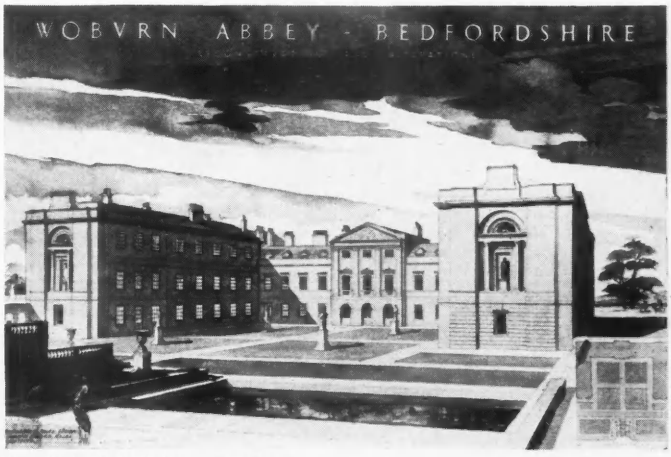
There are also a few works which contain the element of progress without that desperate urge to break with the past which seems to be the aim of much school-fed modernism. Among such we find two contrasting exhibits by Messrs. W. Curtis Green, Son and Lloyd—the Banking Hall of Barclay's Bank at Exeter (No. 1134), and Lord Mayor Treloar's College in Hampshire (No. 1138).

There are two bridges of some importance, neither of them without merit. No. 1178 is the bridge over the Cherwell at Oxford, a monumental stone bridge of some character, not quite happy in the applied early Greek Doric columns which Rennie used so skilfully at Waterloo but a design of which its author, Mr. Raymond Erith, need not be ashamed. The other is No. 1142, which shows Bridstow Bridge, Ross-on-Wye, designed by Mr. Arthur Bailey, and drawn against a charming landscape by Mr. J. D. M. Harvey. Its lines follow the adventuresome engineering of the modern school, and are architecturally somewhat alarming.

What are we to say of the tiresome array of modern ineptitude which forms the background to these slighter virtues? What can we conclude, for instance, when, without referring to the catalogue and standing too far off to read the captions we see a somewhat uninteresting cinema, only to find on checking up that it is in fact a church? One cannot pretend to be even polite to this sort of work. We

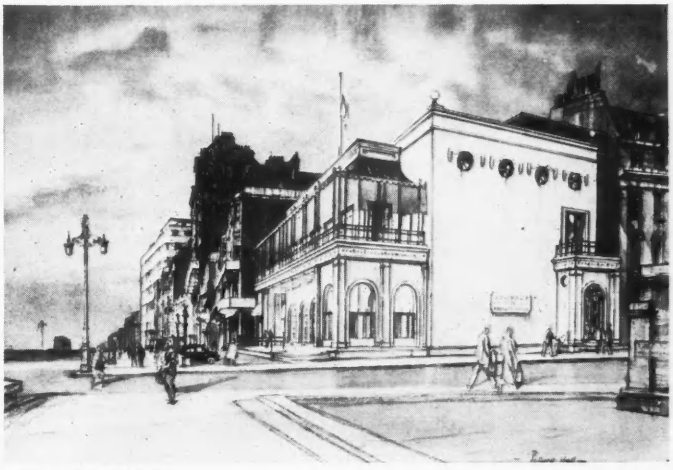
Drawn by E. A. S. Houfe.

NEW BUILDING FOR "THE FINANCIAL TIMES."
Professor A. E. Richardson, RA, FRIBA, Architect.



Drawn by E. A. S. Houfe and T. J. Roberts.

RECONSTRUCTION AND ALTERATIONS AT WOBURN ABBEY.
Professor A. E. Richardson, RA, FRIBA, Architect.



Drawn by Patrick Hall.

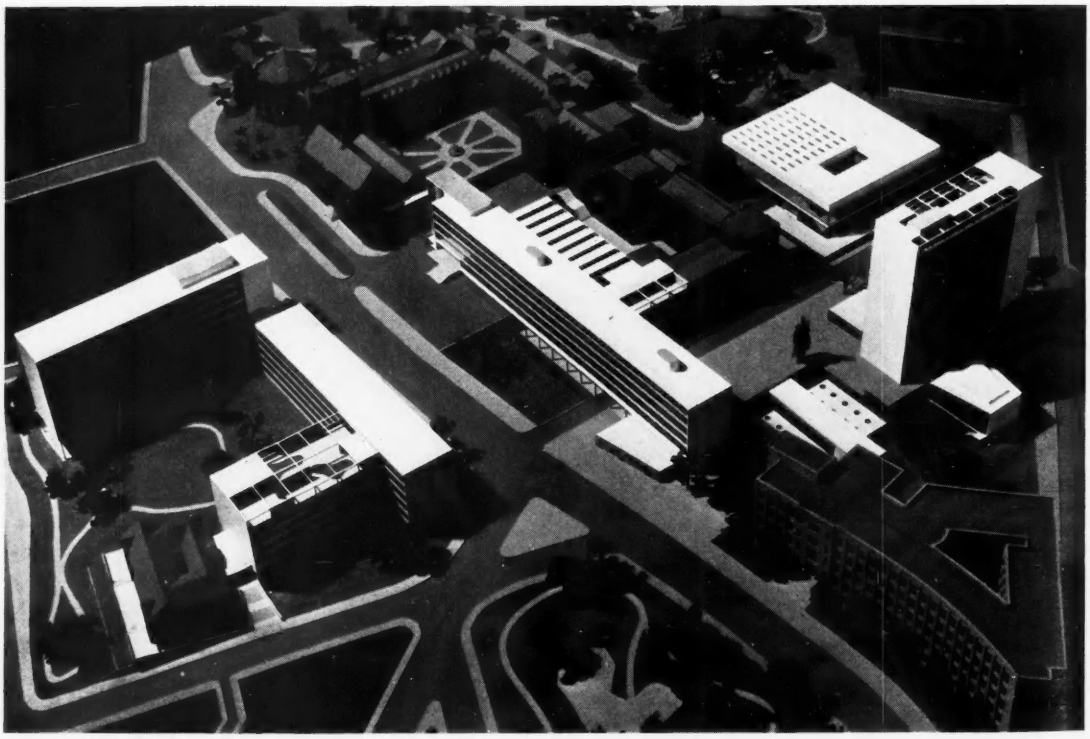
PROPOSED PUBLIC HOUSE, BRIGHTON.
Robert Atkinson and Partners, Architects.

Drawn by Lawrence Wright.

EIGHT HOUSES, LONDON ROAD, ASCOT, for Commissioners of Crown Lands. Clifford Culpin, FRIBA, Architect.

see, for instance, a number of models, beautifully assembled by competent craftsmen, who must be sick to death of rendering the endless monotony of these deadly gridirons. We see the Ministry of Works, younger though bigger brother to the old Office of Works, from which we got many lovely Post Offices and Telephone Exchanges in fine brickwork and masonry which grace our towns up and down the country, now serving up the most depressing collection of exhibits that can ever have hung on the walls of Burlington House. Surely they can have been included only to initiate a taxpayers' revolt? Let us give neither title nor numbers to them. And there are several others, some by firms with big names, which reach nearly to the same record "low."

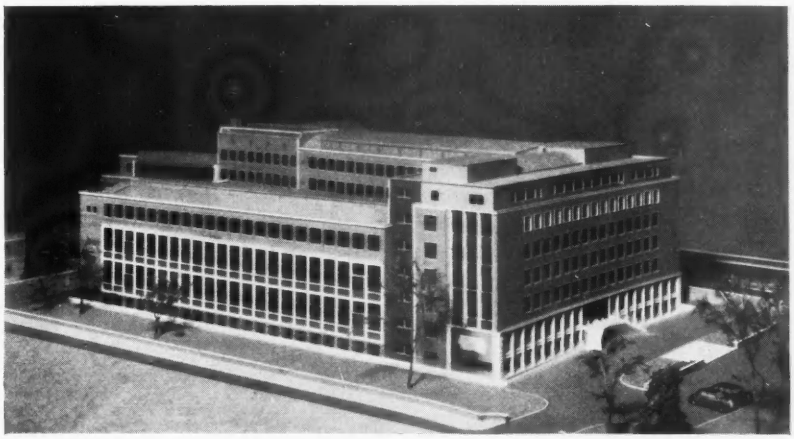
It is indeed a depressing show, not because it has nothing in it that is good but because one has the sad feeling that the virtues are dwindling remnants in the flood of insensitive materialism which threatens to engulf the world of modern architecture.



From a model.

UNIVERSITY OF SHEFFIELD. Proposed Development. Gollins, Melvin, Ward and Partners, Architects.

ARCHITECTURE AT THE ROYAL ACADEMY SUMMER EXHIBITION, 1954

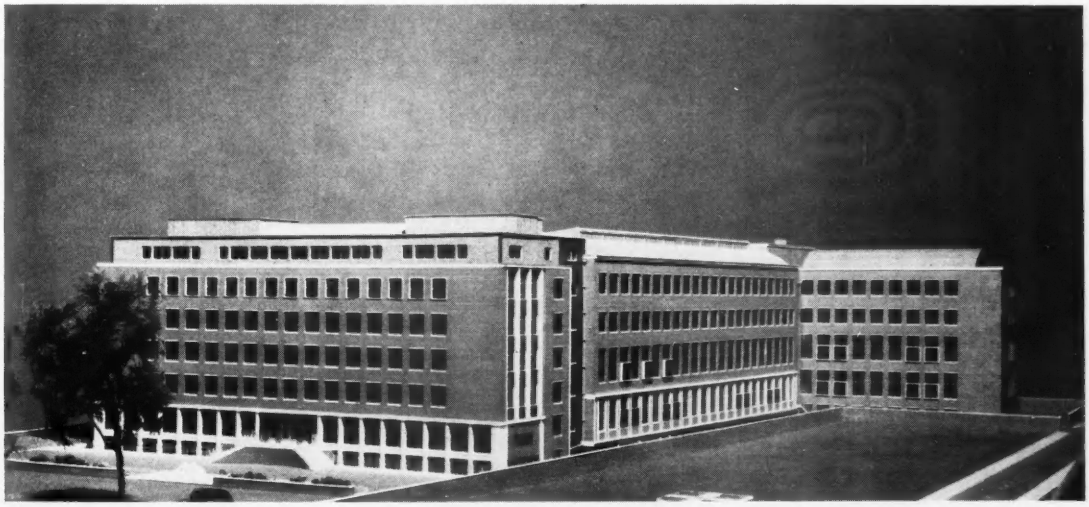


From a model.

NEW CHEMISTRY LABORATORIES, UNIVERSITY OF CAMBRIDGE.

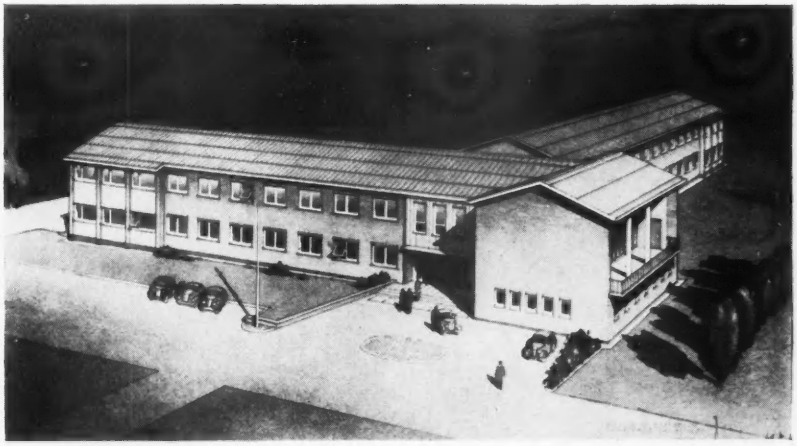
Easton and Robertson, FF.RIBA, Architects.

(Another aspect of the model is shown below).



NEW LABORATORIES FOR THE NATIONAL COAL BOARD, STOKE ORCHARD, CHELTENHAM.

Howard Robertson, ARA, PRIBA, Architect.



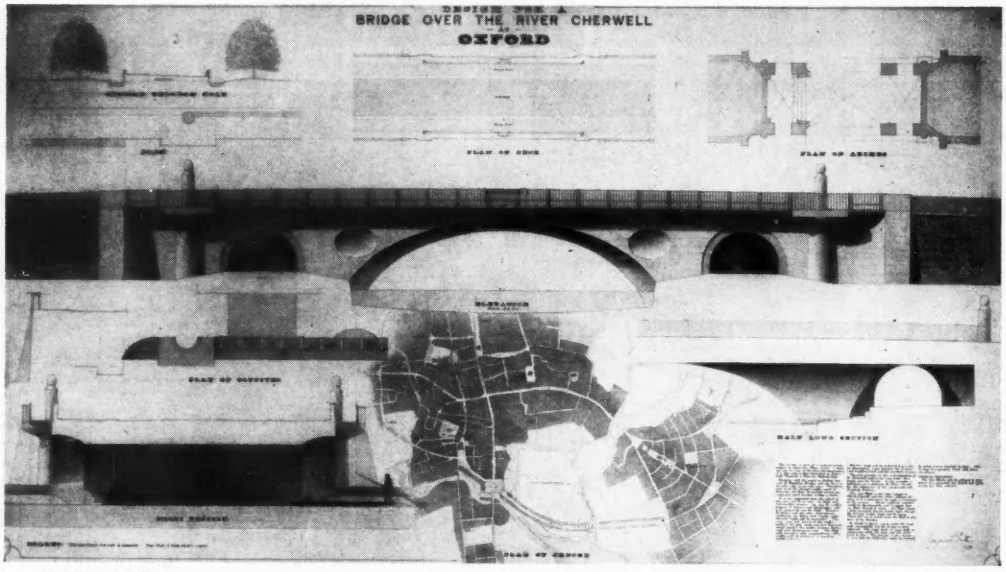
Drawn by Lawrence Wright.

BRIDSTOW BRIDGE, ROSS-ON-WYE.

Arthur Bailey, OBE, FRIBA, Architect.

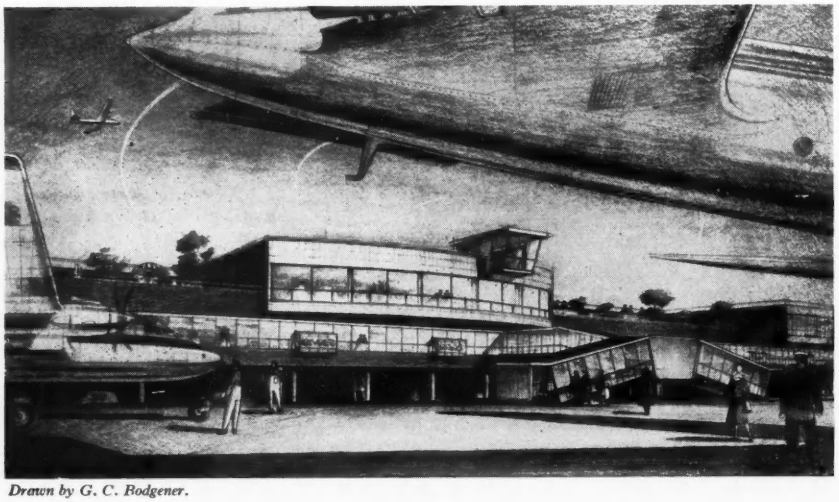
Scott and Wilson, Engineers.

Drawn by J. D. M. Harvey.



Drawn by Raymond Erith.

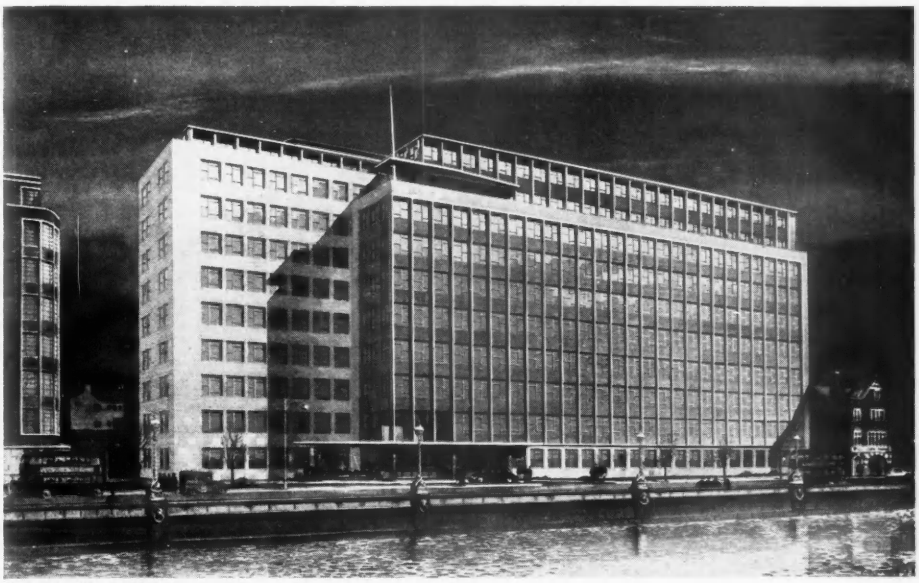
DESIGN FOR A BRIDGE OVER THE RIVER CHERWELL, OXFORD.
Raymond Erith, FRIPA, Architect.



Drawn by G. C. Bodgener.

LONDON AIRPORT:
View of Passenger Building from Apron.

Frederick Gibberd, CBE, FRIBA, Architect.



Drawn by Howard Sant.

Above
OFFICES, 20, ALBERT EMBANKMENT, SE.

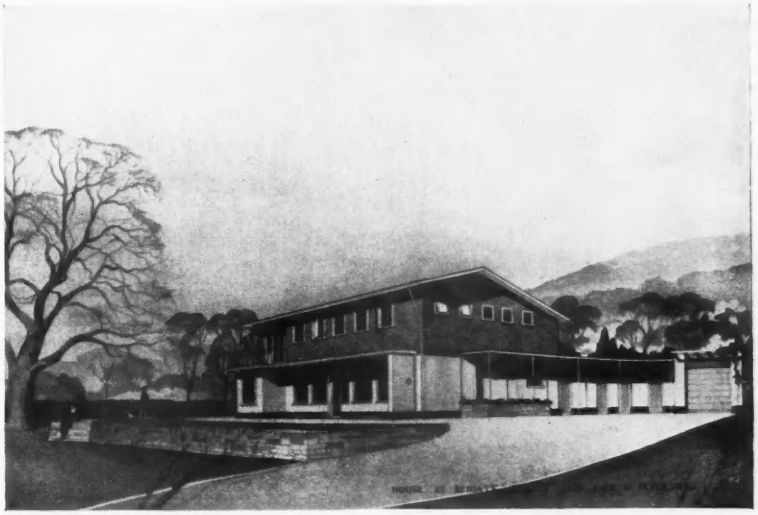
Sir Thomas P. Bennett, KBE, FRIBA, Architect.

Right
HOUSE AT REIGATE.

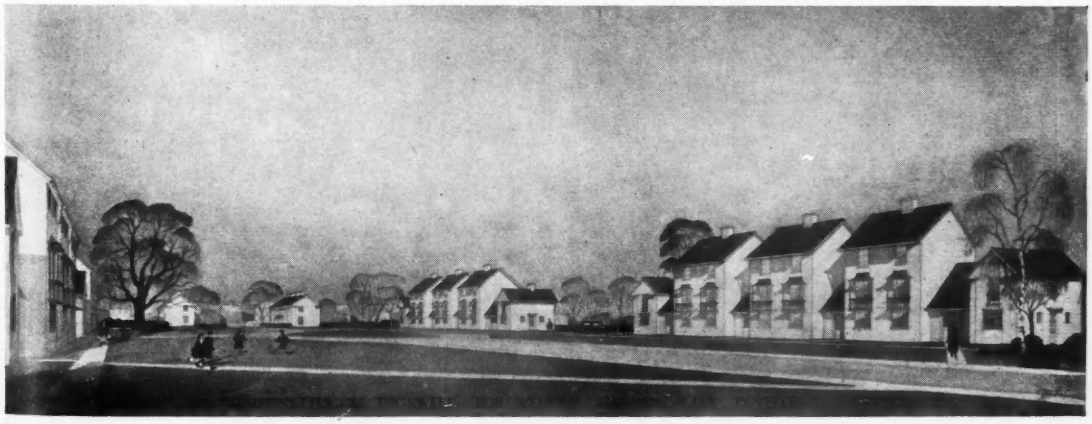
John Stammers, ARIBA, Architect.

Below
FLATS AND MAISONETTES, DIGSWELL, FOR WELWYN GARDEN CITY DEVELOPMENT CORPORATION.

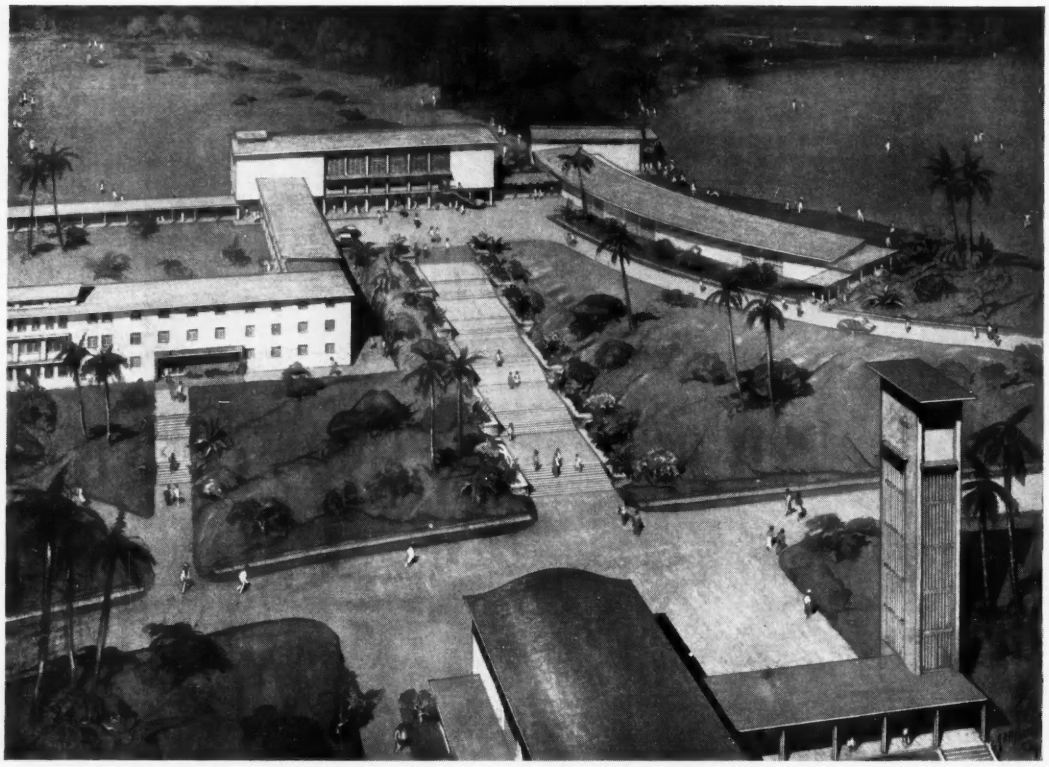
Louis de Soissons, RA, and Partners, Architects.



Drawn by John Stammers.

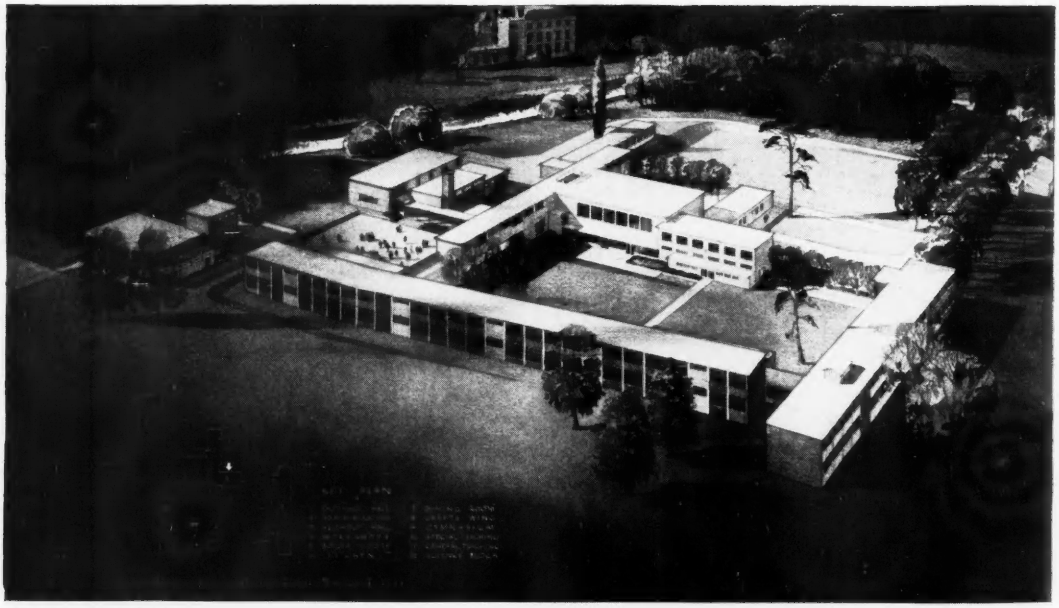


Drawn by John Stammers.



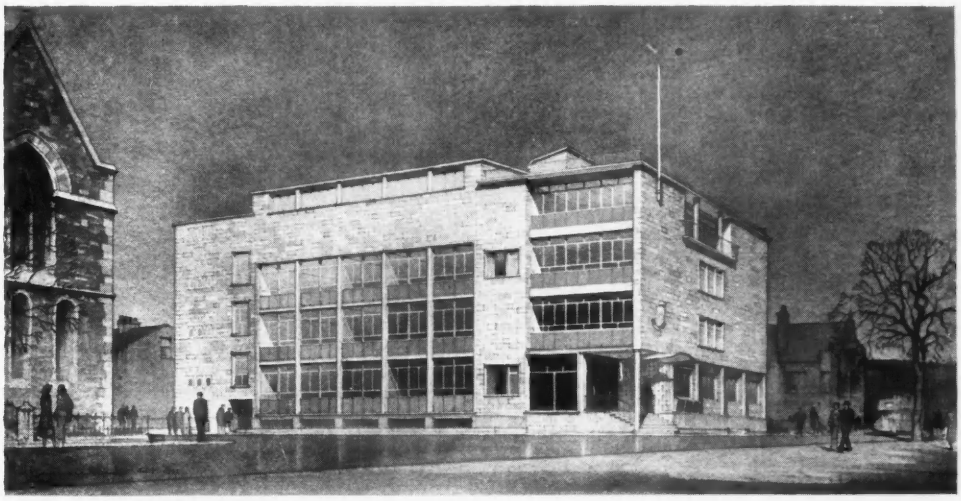
Drawn by J. D. M. Harvey.

FOURAH BAY COLLEGE, SIERRA LEONE : Great Hall, Library and Chapel.
Graham Dawbarn, CBE, FRIBA (Norman and Dawbarn), Architect.



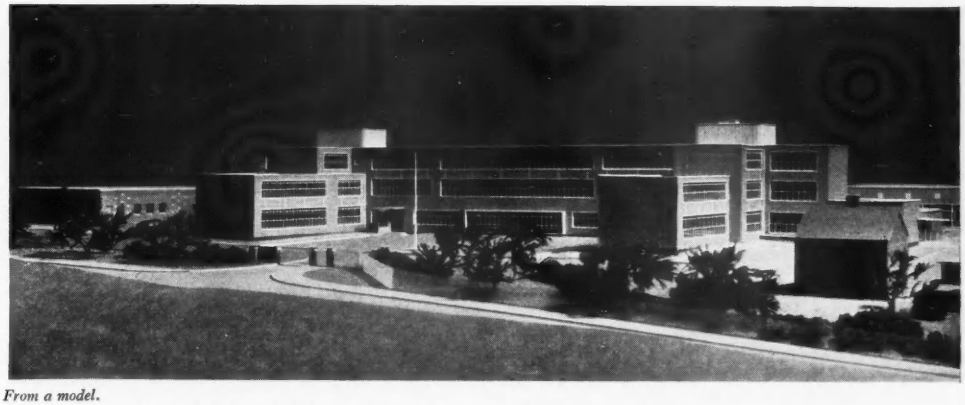
Drawn by Frank A. Weemys.

CHESHUNT SECONDARY MODERN SCHOOL.
Graham Dawbarn, CBE, FRIBA (Norman and Dawbarn), Architect.



Drawn by Lawrence Wright.

KEIGHLEY TECHNICAL COLLEGE. Hubert Bennett, FRIBA, West Riding County Architect.

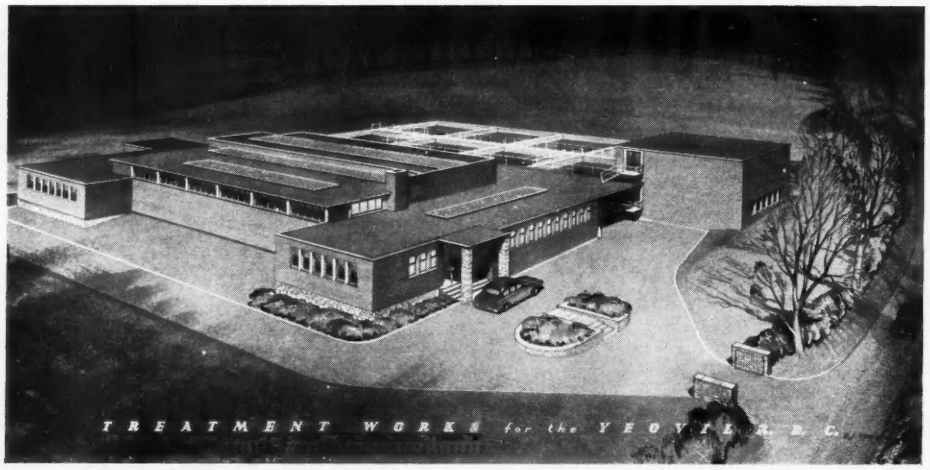


From a model.

ARCHER'S COURT COUNTY SECONDARY SCHOOL, DOVER.
Howard Lobb, CBE, FRIBA, Architect.

Drawn by J. D. M. Harvey.

BROADSTAIRS MODERN SECONDARY SCHOOL.
Woodroffe, Buchanan and Coulter, FF.RIBA, Architects.



Drawn by E. J. Thring.

Above
TREATMENT WORKS FOR YEOVIL RDC

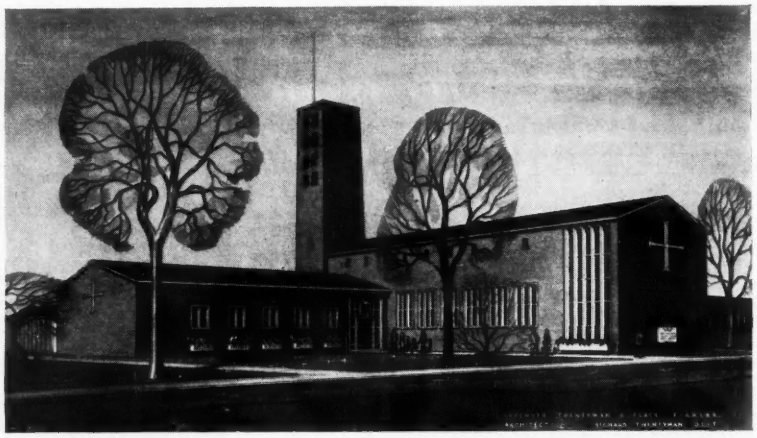
John A. Strubbe, ARIBA, Architect.

Right
PROPOSED CHURCH AND HALL, BENTLEY, STAFFS.

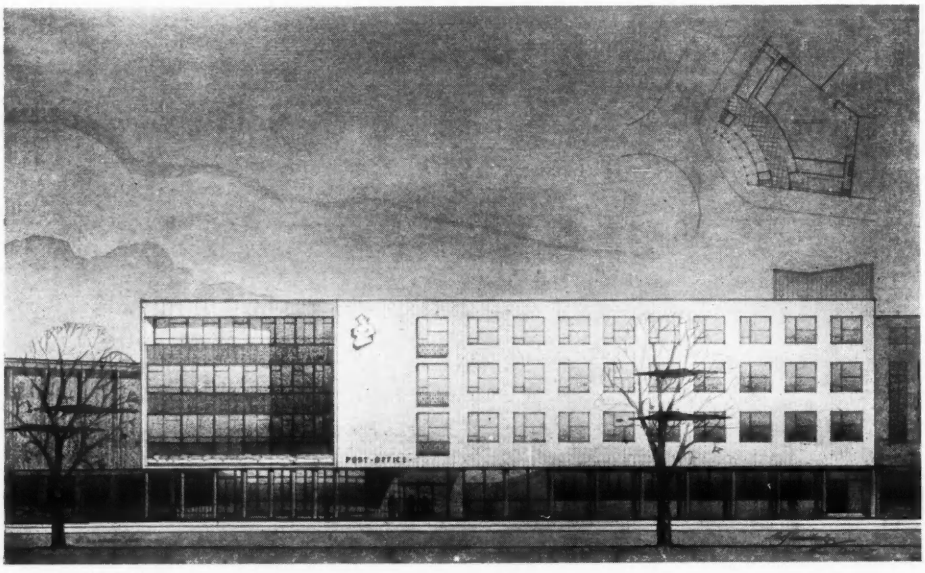
Lavender, Twentyman and Percy, Architects.

Below
PLYMOUTH HEAD POST OFFICE.

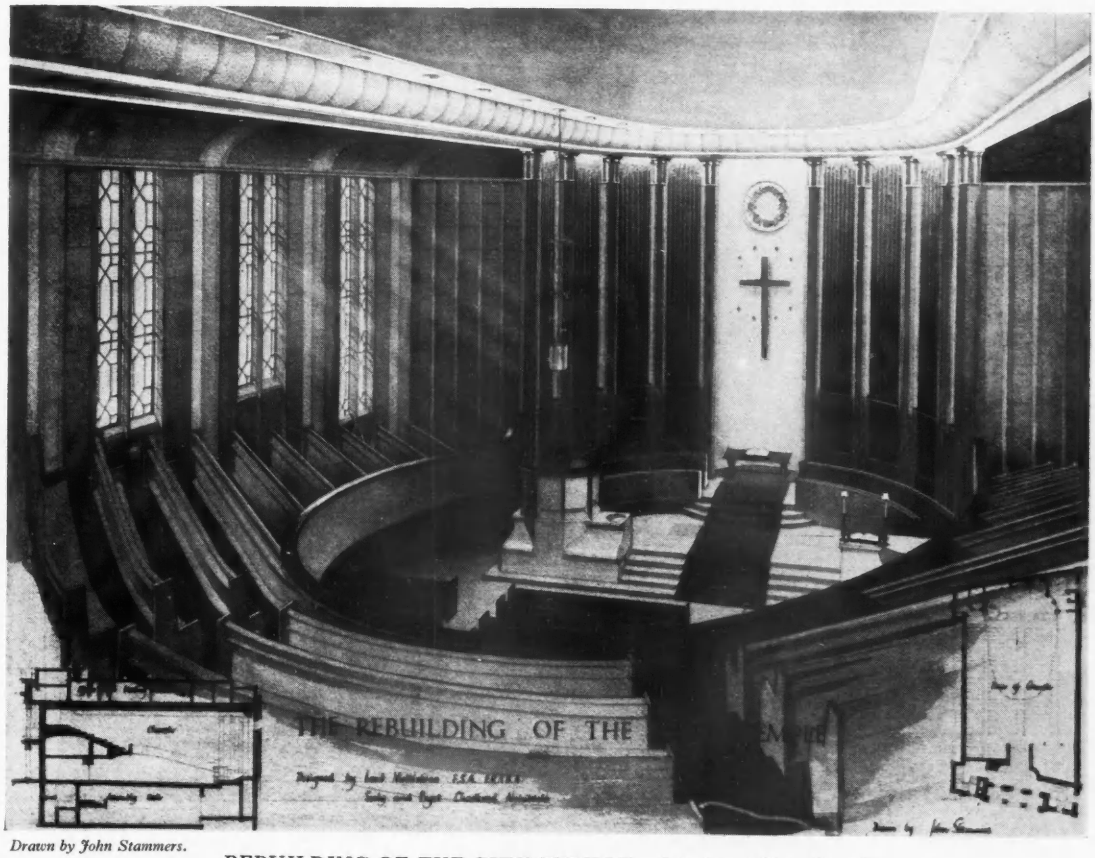
Christopher J. Woodbridge (MoW), Architect.



Drawn by R Twentyman.

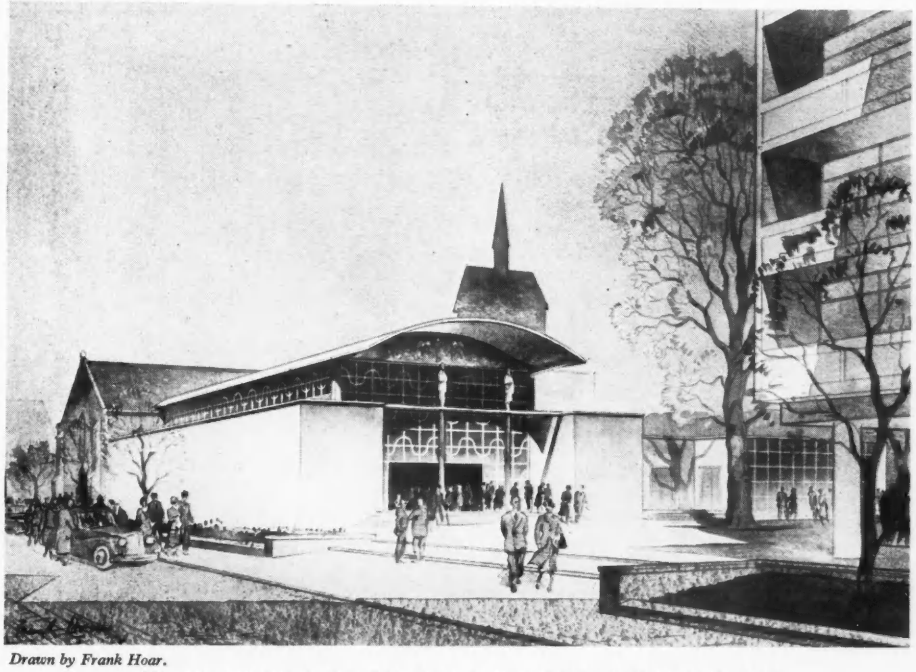


Drawn by W. R. Haden



Drawn by John Stammers.

REBUILDING OF THE CITY TEMPLE. Interior of New Church.
Lord Mottistone (Seely and Paget), Architect.



Drawn by Frank Hoar.

EXTENSION TO ST. JOSEPH'S CHURCH, ROEHAMPTON.
David Stokes and Partners, Architects.

General view of entrance hall. Below : The main staircase.

ALTERATIONS TO MARCONI HOUSE, STRAND, WC2

Architects
JOHN A. STRUBBE & PARTNERS, AA.RIBA, IN ASSOCIATION WITH F. J. TAYLOR, FRIBA

Consulting Engineers
K. DASH & PARTNER

Quantity Surveyors
C. E. BALL & PARTNERS

Builders
ASHBY & HORNER, LTD.

MARCONI HOUSE, originally built as the Gaiety Hotel in 1904 to plans by Ernest Runtz and elevations by Norman Shaw, had a short life as an hotel, being occupied by the Marconi Companies from 1912-33 as their offices. It was from this building in 1922 and 1923 that the first radio broadcasts were made by the London Broadcasting Station, "2LO," operating from studios on the seventh floor.

The building had never seriously been converted from its hotel form, and so it became necessary to carry out extensive internal reconstruction to provide the maximum office accommodation when the Marconi Companies returned as part of the English Electric group in 1950. The service rooms, lifts and stairs, together with many of the lavatories, partitions and fireplaces, were removed throughout, but the most extensive structural work was done on the ground and basement levels where new floors and staircases were built.

The entrance hall is now double its original size and is approached from the Strand and Montreal Place. To effect this the floor immediately inside the Strand doors was lowered by 2 ft. for a distance of 20 ft., and a staircase to the basement removed and reformed alongside the Montreal Place entrance, whilst a series of load-bearing piers and stanchions, some carrying loads from the seventh floor, were replaced by a system of beams and a single stanchion carried down to a new foundation in the basement.

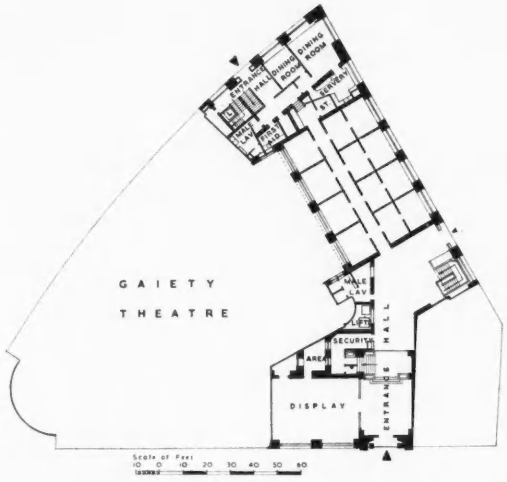
The contrasting qualities of oak and mahogany are used for decorative effects throughout the building, a choice influenced by the large amount of mahogany available from the old building.

The eight offices on the ground floor are formed in standard unit partitioning of hardboard- or ply-faced panels with glazing and door frames in oak, to a unit width of 3 ft. and heights between 8 ft. and 11 ft.

The entrance from Aldwych is more intimate and is panelled with Indian laurel with oak framing and louvres to a height of 3 ft., and an oak glazed screen separates it

Detail of Basement Restaurant showing draught screen in oak and laurel.

General view of the Basement Restaurant, with mural by E. J. Thring, ARCA, in the background. The concrete stanchions have been encased in Indian laurel with oak corner fins.



Strand entrance and (above) ground-floor plan, which also shows the position of the old Gaiety Theatre.

from an inner hall panelled 7 ft. high and giving access to two private dining-rooms, kitchen, first-aid room and lavatory, besides the offices and main entrance hall beyond. These rooms were newly formed, as was the staircase leading to the kitchen staff and store rooms at mezzanine level over the basement kitchen, which serves a restaurant and dining-rooms on the ground and third floor by means of a lift.

On the seventh floor a residential club was required for use of the companies' overseas visitors and representatives, and here 12 single bedrooms are provided.

The general contractors, Messrs. Ashby and Horner, Ltd., undertook the structural work, plastering, stonework and joinery. Following is a list of sub-contractors and suppliers :—

Concrete flooring (new third floor), Concrete, Ltd. ; steelwork (third floor), Boulton and Paul, Ltd.; (general construction), H. J. Horswell and Son, Ltd. ; stone cleaning, London Stone Cleaning and Restoration Co., Ltd. ; roofing (lift motor room), Standard Flat Roofing Co. ; pavement lights, Haywards ; metal lathing (basement to third floor), W. H. Colt, Ltd

Electrical installation : (including concealed lighting), Edmundsons Electric Co., Ltd. ; fittings (fluorescent to offices), Siemens Electric Lamps and Supplies, Ltd.; (fluorescent—third floor), Troughton and Young (Lighting), Ltd.; (seventh and third floors, second and first floor meeting, canteen and ground floor dining rooms), Troughton and Young, Ltd. ; (entrance hall), Hume Atkins and Co., Ltd. ; stair fittings, Geo. Forrest and Son, Ltd. ; cold cathode, (board room), The General Electric Co., Ltd. ; fans (seventh floor club), Vent-Axia, Ltd. ; (ground floor), Hotpoint Electric Appliance Co., Ltd. ; (clocks), Gent and Co., Ltd.

Lifts (cars, machinery), J. and E. Hall, Ltd. ; (motors), The English Electric Co., Ltd. ; (service lift), J. and E. Hall, Ltd. ; heating and ventilation, Richard Crittall and Co., Ltd. ; plumbing, Mumford, Bailey and Preston, Ltd. ; sanitary fittings (w.c's.), Froy and Sons ; ironmongery (door furniture, numerals, plastic lettering), Yannedis and Co., Ltd. ; (key labels), F. N. Knight and Co. ; glazing, Leay Glazing Service, Ltd. ; (Aldwych entrance, main entrance), The London Sand Blast Decorative Glass Works, Ltd. ; ventilators (ground floor windows), Greenwoods and Airvac Vent. Co. ; Louvres (Aldwych entrance), H. W. Cooper and Co., Ltd. ; marble, terrazzo, J. Whitehead and Sons, Ltd. ; mirrors (seventh floor, third floor), The London Sand Blast Decorative Glass Works, Ltd. ; (ground floor), James, Clark and Eaton, Ltd. ; handrails, F. J. Lewis, Ltd. ; metal balustrade, H. and C. Davis ; guard railing, Henry Green, Ltd.

Kitchen equipment (installation), Stitson, White and Co., Ltd. ; tray rail), James Stott and Co., Ltd. ; lightning conductors, J. W. Gray and Son, Ltd. ; fibrous plaster, Clark and Fenn, Ltd. ; acoustic ceiling (canteen), Clark and Fenn, Ltd. ; flooring : lino, Korkoid Decorative Floors, Ltd. ; (third floor), Gabriel Wade and English, Ltd. ; (first and ground floors), Monarch Flooring Co., Ltd. ; tiling (first to seventh floors, basement and ground floor), Harradine, Rouse and Co., and Camden Tile and Mosaic, Ltd. ; fire extinguishers, Pyrene and Co., Ltd. ; telephones (internal), Siemens Brothers and Co., Ltd. ; carpet and curtains (seventh floor), Perez (London), Ltd.; chairs (seventh floor), Heal's Contracts, Ltd. ; settees (seventh floor), A. T. Chamberlain and Co., Ltd. ; (second and first floors), Fergus Decoration, Ltd. ; suspended ceiling (third floor), Anderson Construction Co., Ltd. ; plastic lettering, H. R. Allen, ARCA ; refrigerator, J. and E. Hall, Ltd. ; 'phone-book holders, A. J. Bird, Ltd. ; map mounting, Hall Harding, Ltd. ; venetian blinds, Tidmarsh and Sons.

ALTERATIONS TO MARCONI HOUSE, STRAND, WC2

Dining-room to Overseas Club on seventh floor.

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Single Price-Rate Approximate Estimating

A NEW APPROACH OUTLINED TO THE RICS

WORK on a new approach to single price-rate approximate estimating, undertaken by a study group of about a dozen members of the Royal Institution of Chartered Surveyors, was outlined at a general meeting on April 14 at Great George-street, SW1, by Mr. W. James, hon. secretary of the Quantity Surveyors' Committee. Members of the group are: A. Prichard (chairman), E. N. Harris (hon. secretary), L. H. Assiter, E. A. Baker, J. B. Cannell, J. W. Cloux, J. F. Green, J. G. Osborne and M. O. Sheffield. This group, assisted by two consulting engineers, Messrs. F. J. Brand and G. W. Granger, is now pursuing a much more complex aspect of approximate estimating—that of an analysis of the comparative costs of various types of structural floors, framings and walls, in an endeavour to see if any basic principles exist governing the cost-relationship between live floor loads on the one hand and various methods of constructing, spanning and supporting the floors to carry them. Following are full extracts from Mr. James's paper:

BY WAY OF INTRODUCTION to our subject (said Mr. James), I would like to remind members of a Paper entitled "Cost Investigation," which was read to a general meeting of quantity surveyors in April, 1946, by that foresighted thinker, Sir Thomas Bennett. In the first part of his paper, Sir Thomas made, among many others, the following points:—

1. It was only possible to prepare estimates of cost in principle after the architects had made a certain number of drawings, and in so far as the cost picture might cause either the abandonment of the scheme or very substantial modifications, that cost picture must be prepared at the earliest possible moment.

2. The cube was the accepted basis at that time.

3. An examination of the actual costs of a large number of similar buildings brought to light a remarkable variation in the cost per unit.

4. He himself did not for one moment believe that the present cube rules for estimating costs of pitched and flat roofs were right.

5. The public was becoming more and more conscious of the necessity of spending money well and this meant that methods of ascertaining costs which were sufficiently accurate for past requirements no longer met the needs of the moment and would not meet the needs of the future.

These statements are, in my view, just as applicable to-day as when they were made. The figures reported to the client at the preliminary stage of approximate estimating, in which cubing now has the prime place, provide him with his first real indication of the likely capital outlay involved in the building project. As a consequence, any sizable errors in the estimates then made can have serious repercussions later; for, like murder, they will out—accompanied, it may be, by both the architect and the quantity surveyor. It was for these reasons that our group decided to study this aspect of approximate estimating first.

Defects of the Cubing and Floor-Area Methods

I think that perhaps the simplest way to indicate how the group began its task is to list the principal failings of the two single price-rate systems at present in use. These failings seem to me to be as follows:

1. Neither the cube nor the floor-area system is satisfactory for universal application. (This is indicated by the fact that cubing has been largely superseded by the floor-area method for buildings of certain types.)

2. With the sole exception of the differentiation made under the RIBA cubing rules between the measurement of pitched and flat roofs—a differentiation upon which I think most surveyors share Sir Thomas's doubts—neither cubes nor floor supers reflect, in a realistic way, the *shape* of the building: and shape has an important bearing on cost.

In this respect, the cube method in effect requires only the void enclosed within the building to be measured and not the structural enclosure which contains this void: and, although the floor area method is more realistic in its approach to this aspect of estimating, in so far as it requires direct measurements of the basic horizontal parts of the building to be taken, this method completely fails to account in these measurements for the variations which occur in the ratio which the external wall perimeters of differently shaped buildings bear to their floor plan areas. (This point may, perhaps, be appreciated more clearly by saying that we can all visualise two buildings of the same cube, floor area and storey heights, each of broadly similar specification—the plans of one being of a square shape whilst those of the other are of a long and thin rectangular shape. The costs of these will differ appreciably owing to the greater external wall area of the rectangular-shaped building.)

3. Under neither of the established methods do the measurements effectively reflect the number of storeys among which its total floor area is distributed, or any variations in the heights of these storeys. (In the case of cubes, this is best illustrated by recalling that two identical type buildings may have the same cubic content when one is of six and the other of seven storeys: whilst the floor-area system gives an identical square footage for every building which has the same total floor plan area, quite irrespective of storey heights and/or of whether the area is contained on one or a dozen floors.)

4. The only practicable way of estimating, by single price-rate methods, the cost of a building with a large basement is to cube or square the floor area of the basement separately from the remainder of the building. (This solution is really foreign to the whole idea of these methods for estimating building costs. Moreover, its application becomes very difficult when one is faced with semi-basements, or with buildings partially sunk into rising ground so that the ground floor on one side is the basement on the other.)

5. The price-rate to be attached to the total cube, or floor area, thus has to take into account not only the type of structure and standard of finish required—points which I think every surveyor will acknowledge are, in themselves, sufficiently intricate to tax his skill—but also all the various imponderable factors of shape, number of storeys, storey heights and extra cost of any storeys below ground. In addition, under the cubing method the integral unit (the foot cube) is so comparatively small, and the collective total so comparatively large, in relation to the cost of building, that a penny difference in estimating the rate may sometimes be a serious matter.

For these reasons, in our lighter moments, my office sometimes refers to the assessment of cube rates as the "crystal and black velvet" stage of the estimate.

The Requirements any New Method Should Endeavour to Satisfy

In the light of the above considerations, the study group decided to see whether it was practicable to evolve a new, universally applicable, single price-rate system, which would accomplish what the cubing method purports to do, without the obvious drawbacks of the latter—in other words, a system which, whilst leaving the type of structure and the standard of finish of the building to be assessed in the price-rate, would take into account *in the measurements*, the following factors:—

1. the shape of the building;
2. the vertical positioning in the building of the floor areas it contains;
3. the storey height, or heights, of the building; and
4. the extra cost of sinking usable floor area below the ground level.

Within the practicable limits of the problem, the group believes that it has substantially accomplished this task, although it fully appreciates that a great deal more research and exploration by a much larger body of practitioners is necessary before this statement can be generally accepted at its face value. Since, however, the investigations made to date appear to indicate an appreciable advance over the results provided by the cube and floor area methods, it seemed only right that the theories explored and developed to date by the group should now be published for general examination. But I must emphasise strongly that these theories are not an Aladdin's lamp which will throw light upon and spirit away all your approximate estimating difficulties. They will not for instance, indicate how you value a proposed building's construction and finish, factors which affect price-rates to a far greater extent than any of those I have dwelt upon earlier; nor will they serve to assist you much in the evaluation of projects of an abnormal character or those concerned with works of alteration, maintenance or redecoration, for all of these are outside the scope of any single price-rate system.

An Early Conclusion

At an early stage, the group found it essential to decide what part of the cost of a new building project could fairly be expected to be assessed by means of any single price-rate method—a method designed, as it must of necessity be, for the application of empirically deduced rates to mere outline particulars of proposed new schemes. The group reached the conclusion that only the value of the structure and its finishings could be assessed in this way, and that, in consequence, the following categories of work would require to be separately estimated:—

1. *Site works, including roads, paths, etc., drains, service mains and external ducts*: Since these works vary so extensively from one scheme to another, the group considers that the only realistic way of estimating them is to proceed by way of priced approximate quantities.

2. *The extra cost of foundations that are more expensive than those which would normally be provided for the type of building concerned*: This item has the same extensive cost variability between one site and another as applies to external works, and such extra foundation costs are therefore best estimated in a similar way.

3. *The category of works which is sometimes loosely described as engineering services, comprising*: (*a*) sanitary plumbing and cold water; (*b*) hot water; (*c*) central heating and ventilation; (*d*) electrical installations; (*e*) gas, compressed air and similar items; and (*f*) lifts.

The cost of these services is seldom constant between one project and another and is therefore a matter which requires separate attention when preparing a considered estimate.

Many surveyors value the first four of these engineering services from experience, by way of a carefully judged percentage addition to the estimated net building cost as assessed by the cube or floor-area methods, and this principle commends itself to the group. Where past experience of similar types of installation is lacking, valuation must be accomplished by way of priced approximate quantities or with the aid of a helpful specialist consultant: methods which also apply to other services such as gas, compressed air, wireless, lifts, and similar works.

4. *Features not general to the structure as a whole*: These include items such as boiler flues, dormers, canopies and the like which it is only practicable, in the group's opinion, to value by way of priced remuneration.

5. *Circular work*: This can vary so greatly according to the radius, the particular material and the form of construction concerned, that the group has not, at any rate as yet, been able to evolve a method of reflecting the extra cost of circular work of all kinds, by way of appropriate measurement allowances. Any constructive help on this matter will be much welcomed.

Basis of the Proposed New System

By now I hope you will be curious to know the basis of the group's proposed new system, so I will state it without further ado. Fundamentally, this consists of measuring the areas of external walls, the floor and the ceiling which enclose each storey of the building. It is for this reason that the group have called their proposal "The Storey-Enclosure System" of approximate estimating. However, as you would expect, this simple basic concept does not, by itself, provide the whole answer to the problem and it is therefore necessary to complicate it slightly by incorporating certain modifications.

The modifications comprised in the latest set of rules prepared by the group are as follows:—

1. *To allow for the cost of normal foundations*, an additional timesing factor of 1 is applied to the area of the lowest floor: this, when added to the single timesing under the basic rule, requires the lowest floor area to be twiced.

2. *To provide for the extra cost of upper floors*, an additional timesing factor is applied to the area of each floor above the lowest. This factor consists of an arithmetical progression of 15 per cent., a term which sounds rather frightening but which only means that the additional timesing for the first suspended floor is .15, for the second .30, for the third .45, and so on.

3. *To cover the extra cost of storeys wholly or partly below the finished ground level*, an additional timesing factor of 1 is applied to the basic wall and floor areas of any such storey to the extent that its external walls and lowest floor adjoin the earth face.

A little thought about the application of this system will make it evident that the required superficial figure is ascertained by totalling the sum of the following measurements of the building:—

First—twice the area of the lowest floor to the extent that this is above the finished ground level, and three times the area of this floor to the extent that it is below this level;

Second—once the area of the roof, which the group considers should be measured on the flat plan area in all cases;

Third—once the area of the upper floors multiplied by a composite timesing factor made up of a constant of 2 (namely, once for the storey below and once for the storey above the floor concerned); puts the appropriate positional factor to which I referred earlier; and

Fourth.—once the area of the external walls of storeys or parts of storeys above the ground, plus, in addition, twice the area of external walls below the finished ground level to the extent that these latter walls enclose any storey or storeys wholly or partly below this level.

The current set of detailed rules, embodying these principles, which the group is now using is set out in Annex No. 1. As with everything of an experimental nature, these rules should not be regarded as the final word on the subject, and the group has an open mind for any amendments which further experience in their application may show to be desirable.

Since the aim of the Storey-Enclosure System is to provide a total superficial figure to which a single price-rate can be attached, the effect of the principles embodied in these rules is to apply a "weighted" cost factor to each of the main components of the building. The factors so applied are as follows:—

To lowest floors (*except those to parts of the building which are below ground*) *and to roofs*:—a timesing factor of 1½ to each. Since these two areas are nearly always identical, the rules are, for convenience, framed to indicate a factor of 2 for the floor and 1 for the roof.

To upper floors:—a basic timesing factor of 2 plus the requisite multiple of 15 per cent. which is appropriate to their vertical situation in the building.

To external walls (*except those of storeys below ground*):—a timesing factor of 1.

In the case of multi-storey buildings where the cost of the lower parts of external walls and stanchions is greater, the group considers it inappropriate to increase the timesing factor to walls, because this extra cost applies equally to internal structural walls, stanchions, etc., which are not measured under the rules. This extra cost is therefore incorporated in the progressionally increasing timesing factor applied to upper floors.

To enclosures below ground: a timesing factor of 2 to walls and 2½ to floors.

As a general average—and I must emphasise that no single price-rate system can reflect anything but a general average from which almost all individual projects will differ in some respects—I think these factors provide a reasonably logical cost "weighting" on the following counts.

1. The lowest floor "weighting" factor of 2 allows for the cost of:—

internal partitioning, finishings, fitments, doors, etc., on the floor; a non-suspended floor; finishings on one side of it; and normal foundations to all vertical structural members in a single-storey building including those of its external walls.

2. The roof "weighting" factor of 1½ provides for the cost of:—

a suspended roof and its (lighter-than-floor) load; finishings on both sides of it (one weatherproof); horizontal structural supports to it (such as beams and trusses); and vertical structural supports to it (such as walls and columns).

3. The upper floor "weighting" factors of 2 *plus* covers the cost of:—

internal partitioning, finishings, fitments, doors, etc., on the floor; a suspended load-carrying floor; finishings on both sides of it; horizontal structural supports to it; vertical structural supports to it; and the further cost which arises, in the case of vertical structural floor supports to the lower floors of multi-storey buildings, from the need to support the additional transmitted load of all superimposed floors and the roof above them.

4. The external wall "weighting" factor of 1 allows for the cost of:—

a wall with weatherproof qualities; finishings on both sides of it; windows and external doors, etc.; and normal architectural features.

5. The below ground "weighting" factors of 2 for walls and 2½ for floors provides for the cost of:—

displacement and disposal of earth; waterproof tanking and the loading skins to keep it in position; members of heavier construction than those required in equivalent positions above ground; finishings on one side of these members; internal partitioning, finishes, fitments, doors, etc.; and normal (in the basement sense) foundations to all vertical structural members in a single basement-storey building.

For the reasons I have just outlined, the

study group maintains that, as nearly as can be expected from any system based on general averages, a total superficial figure ascertained in accordance with the measurement rules of the Storey-Enclosure System of approximate estimating satisfies the four requirements listed earlier, that is to say:—

Shape is reflected because all the surrounding surfaces of the building are measured;

Vertical positioning of floor areas is taken into account by reason of, first, the greater measurement product given to suspended floors as compared with non-suspended, and second, the increasingly greater emphasis applied to their areas according to the numbers of floors below them;

Storey Heights are embodied because the lower the height of the storey, the higher will be the proportion of the total figure taken up by floor and roof measurements, as compared with those of external walls—moreover, measurements taken in this way allow each storey height in the building to be given its relative importance in making up the total figure, an attribute which is particularly useful, for instance, when dealing with those awkward things known as mezzanine floors which are so difficult to value under the cubing method; and

Cost of sinking storeys below ground is allowed for by means of the proportionately larger area allocated, in making up the total, to those enclosing walls and floors which are under-ground.

These are bold assertions, and when the basic theory of the new system was first mooted, the majority of the group was just as sceptical as the major part of my audience no doubt is now:—indeed this unbelief was clearly justified until the original proposal of measuring the structural enclosure of the whole building (plus only once the area of its suspended floors) was modified to that of applying this principle separately to each of its storeys.

Examples of Storey-Enclosure Price-Rates Calculated from Actual Contract Documents

Before reaching its present stage of confidence in the principles of the Storey-Enclosure System, the individual members of the study group analysed some 90 tenders for new buildings of various kinds, of a total value of about £5 million, by reference to the original drawings and priced bills of quantities, and its members began to test the system, in double harness with cubes or floor areas, in their own offices on a number of proposed new projects. To enable the price-rates ascertained by these analyses to be compared and studied two preliminaries were essential.

First.—Since little could be gained by comparison between the rate of a dutch barn with that of a Buckingham Palace, it was necessary to separate the various buildings into a number of general types and to study only those types of which a reasonable number were likely to be available. The types of building selected by the group were flats, schools and industrial buildings. More recently some attention has been given to the application of the system to houses built, under contract, for letting.

Second.—In this era of fast-changing prices, it was also necessary to devise a table of conversion factors which, by taking account of the general price levels ruling at the dates of any of the tenders under examination, could be applied to all the individual rates to reduce them to a common price-time datum. The table finally adopted by the group is set out in Annex No. 2 to this Paper.

Before drawing your attention to the results of the analyses made, I would like to clear the one further point of why the group used tender figures and not final account figures. This lies primarily in the fact that the aim of an approximate estimate is to forecast the amount of the lowest tender; for it is against this sum, and at that stage against this sum alone, that the calibre of the estimate will be judged by the client. Divergencies between the contract sum and the total of the final account are generally due to reasons entirely unsuspected at the time the forecast is made, and cannot, therefore, properly be taken into account when devising any system of approximate estimating.

ANNEXES

Annex 1: Method of Application and Measurement Rules

I. *Method of Application.*

A. The basis of the Storey-Enclosure System for estimating the approximate cost of a building is the application of a single price-rates to the "Storey-Enclosure Area" of the building.

B. The rules for measurement of the Storey-Enclosure Area given in Section II below are designed to take into account, as far as practicable, the following aspects of cost:—

(*a*) the size and shape of the building;

(*b*) the number, and heights of the storeys in the building;

(*c*) the cost of normal foundations; and

(*d*) the cost of sinking usable floor space below the finished ground level; for example, basements, semi-basements and the like.

C. The price-rate should be assessed to take into account only the cost of the structure and the finishings of the building. To the sum obtained by applying this price-rate to the Storey-Enclosure Area should be added separately assessed valuations of the following items as may be appropriate:—

(i) construction not common to the general run of buildings, such as the extra cost of abnormal foundations, circular facades and high parapets;

(ii) features not general to the structure as a whole; for example, detached boiler flues, dormers and canopies;

(iii) services, including sanitary, water, gas, electrical and heating installations, mechanical ventilation, lifts and similar work;

(iv) site works, including contour levelling, roads, paths, fences, drains, site ducts and the like; and

(v) any other items not taken into account in the assessed price-rate.

The price-rate must provide, in addition to the standard of construction and finish of the building, for its internal planning layout and for the tendering conditions likely to apply to the particular project.

D. If only a preliminary indication of cost is required, an inclusive price-rate can be used: but in this event the price-rate must be assessed to take into account the whole cost of the project.

E. The system is not designed for estimating the cost of unusual structures or works of alteration, maintenance or redecoration.

II. *Rules for the Taking of Measurements*

1. The Storey-Enclosure Area.

The sum total of the measurements of floors, roofs and walls taken in accordance with the following rules is the "Storey-Enclosure Area" to which the price-rate should be applied for estimating purposes.

2. Floor Measurements.

Take once the area of each floor and apply, to the various component areas the following multipliers:—

Floor	*Multiplier*
Areas with no floors vertically below same	2
,, ,, 1 floor ,, ,, ,,	2.15
,, ,, 2 floors ,, ,, ,,	2.30

and so on, increasing the multiplier by .15 for each additional floor.

Notes.—(i) Dimensions are to be taken to the outer faces of the walls around the floors concerned.

(ii) Staircases, lift-wells and the like shall be measured as if they were floored at each storey.

3. Roof Measurements.

Take once the plan area of all roofs.

Notes.—(i) Dimensions are to be taken to the external face of the walls supporting the roof irrespective of the type of roof. Overhangs at eaves shall be ignored.

(ii) In the case of mansard roofs the face area of the lower, more steeply sloping portion shall be measured in addition to the plan area of the whole of the roof.

4. Wall Measurements.

Take once the area of all external walls.

Notes.—(i) Dimensions are to be taken on the external face of the wall from its lowest floor level up to the line where the external faces of the wall and roof would meet. Parapet walls to roofs and balconies shall be ignored and no deductions are to be made for openings.

(ii) The external faces of all chimney stacks above the level to which the wall heights have been taken shall be measured.

(iii) Party walls next existing properties shall be treated as external walls.

(iv) No internal walls or partitions shall be measured.

5. Additional Measurements for Storeys wholly or partly below ground level.

Take once the area of the external walls and lowest floor of any storey or storeys of the building which are wholly or partly below the finished ground level, to the extent that these enclosing walls and floor are below this level. These additional measurements are to be taken in accordance with the previous rules except that the vertical dimensions are to be taken only up to the finished ground level.

Annex 2: Table of Conversion Factors

Factors applied to the rates in Annexes 3A-6A to adjust prices of varying dates to the level of those ruling at June, 1951.

Tendering Period to which Conversion Factor Applies	*Conversion Factor (to nearest 2½ per cent.)*
December, 1948, to January, 1949	Add 20 per cent.
February, 1949, to October, 1949	,, 17½ ,,
November, 1949, to January, 1950	,, 15 ,,
February, 1950, to January, 1951	,, 12½ ,,
February, 1951	,, 7½ ,,
March, 1951, to May, 1951 ..	,, 2½ ,,
June, 1951, to September, 1951..	Nil
October, 1951, to January, 1952..	Deduct 2½ per cent.
February, 1952, to November, 1953	,, 7½ ,,

With this preamble, I refer to you Annexes 3A to 6A and 3B to 6B inclusive which set out in tabulated form the main results of the group's investigations. The No. 3 sheets relate to flats, the No. 4 to schools, the No. 5 to industrial buildings and the No. 6 to houses.

The "A" papers give the comparative cube, floor area, and storey-enclosure price-rates of the buildings concerned. The left-hand rates are those relating to the carcass and finish only of the buildings exclusive of all the engineering services, site works and other abnormal extra costs to which I have referred earlier; and the right-hand rates are the inclusive overall ones for the same buildings obtained from the related total tender figures; these include all the services, site works and abnormal costs except in those cases where any of these items were excluded from the building contract. All the price-rates on these "A" sheets have been converted to the 1951 price-time datum by the application of the conversion factors given in Annex 2, so as to enable a proper comparison to be made between all the rates concerned.

The "B" papers give explanatory particulars connected with application of the Storey-Enclosure System to these same projects. The conversion factors have not been applied to any of the price-rates on these "B" sheets, but the date of the tenders is given in each case. When using the system in practice, it would not, of course, be necessary to examine and record a large part of the information shown on the "B" sheets, which has been included in this Paper to assist you in studying the new system and to give initial data to those who propose to try out the new system in their own practice.

ANNEX 3A: FLATS BUILDINGS

Comparison of Cube, Floor Area and Storey-Enclosure Price-Rates

Ref. No.	Brief Description	Net Price-Rates for Buildings (excluding all Services, Drains and Site Works), converted to June, 1951, Datum			Gross Price-Rates for all Works in Tender, converted to June, 1951, Datum		
		Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure	Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1	Bed-sit. and 1, 2, 3 and 4 Bed—Local Authority	3 10	38 5½	11 0½	4 9¾	48 4½	13 10
2	2, 3 and 4 Bed; Party Maisonettes—Local Authority	3 7½	34 11½	10 6¾	4 7	44 6	13 5½
3	3 Bed—Local Authority	3 4	32 6½	9 7½	4 2	40 6½	11 11½
4	Old People—Local Authority	3 2¾	36 10	9 9	4 1½	46 10¾	12 4¾
5	2 Bed—Local Authority	3 2	34 6	10 1	3 9¾	41 6	12 1½
6	4 Bed—Local Authority	2 11½	32 10½	9 5½	3 6	38 10	11 2
7	3 and 4 Bed; Balcony approach—Local Authority	3 3½	34 11	9 11½	4 2½	44 6½	12 8
8	1 and 2 Bed—Local Authority	2 8¾	30 8½	9 2½	3 7½	40 6¾	12 2½
9	2, 3 and 4 Bed—Local Authority	3 5½	33 8¼	10 0¼	4 5½	43 4½	12 11
10	Small High-class West End—Private Client	6 3½	64 2¾	15 7¼	9 11¼	101 5½	24 7¾
11	2 and 3 Bed—Local Authority	3 0½	32 11	10 1½	3 6	38 2½	11 9
12	2 Bed—Local Authority	2 1½	24 5½	7 5¾	3 0¼	34 10¾	10 8
13	2 and 3 Bed—Local Authority	3 4	32 7¾	9 9½	4 1¾	40 6¼	12 1¾
14	1 and 2 Bed and Basement Stores, etc.—Local Authority	2 9¾	31 1½	9 3¾	3 10½	42 10¼	12 10
15	1, 2 and 3 Bed and Public Library—Local Authority	2 11	34 3	9 3¾	3 10¾	45 8	12 5
16	2 Bed—Local Authority	2 6	27 6	8 4½	3 4	36 7½	11 1½

ANNEX 4A: SCHOOL BUILDINGS

Comparison of Cube, Floor Area and Storey-Enclosure Price-Rates

Ref. No.	Brief Description	Net Price-Rates for Buildings (excluding all Services, Drains and Site Works), converted to June, 1951, Datum			Gross Price-Rates for all Works in Tender, converted to June, 1951, Datum		
		Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure	Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1	Class Rooms, Changing Room and Masters' Flat for Public School	3 2½	43 8¾	11 5¾	4 0½	55 1¾	14 5¾
2	Primary for 840	3 0	44 7	11 4½	4 7½	68 8	17 6½
3	,, ,, 800	2 8½	44 3½	12 4	4 0½	65 5	18 2½
4	,, ,, 520	2 8½	41 4	11 7½	3 10½	59 3¾	16 8
5	Secondary Modern for 600	3 0¾	43 4¾	11 7	5 7¾	78 10¾	21 0¾
6	Further Education Workshop and Technical Block	2 5½	35 4¾	10 9¼	3 7	51 6¾	15 8¼
7	Primary for 240	2 10½	45 7½	12 0¼	4 10¼	77 7½	20 5½
8	,, ,, 560	2 6¼	38 9¼	10 3¼	3 9	57 8¼	15 3½
9	,, ,, 560	2 6¾	38 1¾	9 11½	4 0	59 4	15 6
10	,, ,, 320	2 7½	39 6¾	9 10¾	4 6¾	68 10½	17 3¾
11	Secondary for 300	2 8	34 11¾	10 9¾	3 10	50 6¼	15 7½
12	,, ,, 600	2 4¾	36 11½	11 1¾	3 5¾	53 9½	16 2¼
13	,, ,, 300	2 6¾	37 3	10 4¾	3 7¾	52 4¾	14 7¼
14	Primary for 520 (in 3 Blocks)	2 3¼	33 6	9 2¼	3 6¼	52 2	14 3¼

Points of Interest arising from the Figures in Annexes 3, 4, 5 and 6

First, it seems important, before proceeding, to see whether the figures support the group's contention that separate assessment of the value of engineering services makes the estimating of the main price-rate a little easier. I think that a glance at the "B" sheets will show that this particular point is a sound one owing to the extreme variability of the relationship between the cost of the building work on the one hand and that of the services on the other; for examples, see Annex 5B, references 29 and 31, where the total cost percentages of the engineering services are 38⅛ per cent. and 14 per cent. respectively.

I am, of course, assuming that the need for estimating separately the cost of site works, lifts and abnormal foundations is undisputed when one is preparing a carefully considered cost forecast. For where all these matters are thrown in, to be assessed in a flash in one price-rate (of the kind indicated in the right-hand rates of the "A" and "B" Sheets), the possibility of real accuracy is about as great as those of winning a treble at the races. It is curious to note that overall inclusive rates usually have to be given, at once, in casual conversation; while a sight of the drawings and a day or two to consider the problem are usually allowed for estimates based upon net rates. Thus is the time element reversed in the old maxim that surveyors can do the impossible at short notice, but require a little longer for miracles!

Second, it is vital to examine the net price-rates on the "A" sheets to see whether the new method effects a reduction in the *range of variation* of the price-rates, by comparing those obtained by the cube, floor area, and Storey-Enclosure System respectively. For this purpose, I have applied two tests, the first being to ascertain how many times the highest rate is of the lowest, and the second, how many of the rates fall within a similar range group above and below the common average. For flats, schools and houses a 10 per cent. plus and minus grouping has been adopted; for industrial buildings, which are not subject to such closely applied ministerial planning and financial restrictions, a wider grouping of

20 per cent. plus and minus is necessary to provide a parallel kind of test.

The results of these tests are as follows:

Type of Building	Total Number of Cases Examined	Timesing of Lowest Rate to equal Highest Rate			Number of Rates within Percentage Grouping		
		Cube	Floor Area	Storey-Enclosure Area	Cube	Floor Area	Storey-Enclosure Area
Flats	16	2.96	2.63	2.09	9	10	12
Schools	14	1.41	1.36	1.34	9	8	12
Industrial Buildings	39	4.42	2.61	2.48	16	24	26
Houses	17	1.45	1.44	1.42	8	9	10

I am sure it is not necessary for me to stress the advantages which would flow from the adoption of a single method of approximate estimating for all types of new buildings—provided, of course, that the method was an improvement on cubing and that it at least holds its own in the particular field where the floor area method has already tended to oust the cube.

From the results I have just given it is clear that the storey-enclosure price-rates are in all cases nearer to the common average in respect of the projects which the group has examined; and in all cases the range of price variation is in fact reduced. The gains are not perhaps as great as might have been hoped, but they nevertheless represent an appreciable advance on present methods. Moreover, it must be remembered that type of structure and finish of the building are bound to have by far the largest influence on price-rates; this can be verified by looking first at the price-rates of the buildings numbered 2 and 24 on Annex 5A—No. 2 being a heavy steel-framed explosion-resisting building, tiled throughout with acid-resisting tiles, and No. 24 being a plain customs shed; and secondly at the price-rate of building No. 10 on Annex 3A, which is a block of West End flats, compared with those of the remainder of the flats which are for local authority housing.

Third, you will no doubt wish me to point to something in the annexes which illustrates that the additional timesing factor of 1 is an appropriate allowance for foundations. This I regretfully found that I could not do without giving you a great many more charts and figures. I can, however, give you the main reasons for selecting this factor, which were:

1. The application of such a factor to the lowest floor area, to allow for the cost of all normal wall and stanchion foundations is an improvement on the way in which the cube method tackles this problem, since it enables all wall measurements to be stopped *at the lowest floor level*—a point at which most sketch plans tend to become very vague; and

2. without such a timesing addition, in the case of houses, the system showed less advantage over the cube and floor-area methods; the relationship between the price-rates of bungalows and houses was out of alignment; and the improvement was not so appreciable as it now is in respect of flats and schools.

Fourth, you will naturally be concerned with the propriety of the additional timesing allowance for taking into account the vertical positioning of the upper floors. Here, I ask you to turn to Annex 3A and look at the rates in column 5 of the flats, buildings numbered 3, 4, 5 and 6. All these buildings are part of a single contract designed by the same architect and priced by the same contractor; building No. 3 is of eight storeys, whilst the others are of only three storeys. As you will observe, the respective storey-enclosure rates are:

9s. 7½d. for the eight-storey building which consists of three bedroom flats; and

9s. 9d., 10s. 1d. and 9s. 5½d. for the three-storey buildings which consist of old people's, two bedroom and four bedroom flats respectively.

In this respect the 10s. 1d. rate is slightly out of step with the others—a fact which appears to be due to some peculiarity of balcony arrangements which the group is still examining—but otherwise the cumulative timesing factor provides a proper relationship between these buildings of widely different numbers of storeys—a relationship which is absent, not only in the cases I have just mentioned, but in the general run of all the figures in the various Annexes, if the factor is increased, reduced or omitted altogether.

Fifth, I will comment on the timesing factor for enclosing floor space below the ground. This was originally devised from the starting point that in the case of three buildings, for which we had separately costed bills of the basement work, the cube rates for the basements worked out at a little less than twice the superstructure cube rates.

As far as the application of the storey-enclosure rules is concerned, I suggest that you look at Annex 3A, buildings Nos. 14 and 15, which have fairly large basements. You will see that the rates in column 5 appear to be in reasonably good alignment with the rates of other buildings in this Annex, most of which have no basements. The same observation applies equally to building No.

ANNEX 5A: INDUSTRIAL BUILDINGS

Comparison of Cube, Floor Area and Storey-Enclosure Price-Rates

Ref. No.	Brief Description	Net Price-Rates for Buildings (excluding all Services, Drains and Site Works), converted to June, 1951, Datum			Gross Price-Rates for all Works in Tender, converted to June, 1951, Datum		
		Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure	Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure
(1)	(2)	(3)*	(4)	(5)	(6)	(7)	(8)
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1	Sweet Manufacture	2 1½	45 5	10 8½	2 8	56 11½	13 5½
2	Chemical Processes	3 7½	56 0½	16 6½	4 1½	63 1	18 8
3	Transhipment Depot	1 5½	37 2½	11 2	2 2½	55 9½	16 8½
4	Workshop	2 5½	32 1½	9 7½	2 11½	38 1½	11 5
5	Factory Laboratory	4 1½	51 9	13 5½	5 0½	62 10½	16 4
6	Bottle Filling and Washing	2 3½	42 3½	10 5½	2 10½	52 11	13 1½
7	Workshop	2 0½	40 0	9 3½	2 8½	52 7½	12 2½
8	Bakery and Offices	1 5½	30 11½	9 1½	1 11½	42 0	12 4
9	Workshop	1 4½	29 11	6 8½	1 9½	39 11½	8 11½
10	Warehouse	2 2½	30 8½	9 3½	2 10½	39 9½	12 0½
11	Precision Instrument Manufacture	2 7½	48 9½	12 8	4 0½	74 6½	19 4½
12	Stores	1 4½	32 0	8 7½	2 1½	49 4½	13 3½
13	Factory Offices	3 3½	43 2	10 3½	5 4½	69 5½	16 6½
14	Repair and Service Depot	2 6½	40 2½	13 10½	3 6½	55 11	19 3
15	Bus Garage	1 1½	28 3½	8 2½	1 7½	39 5½	11 5
16	Machine Shop	3 3½	53 9	12 10½	4 0½	66 2	15 10
17	Hat Making and Offices	2 7	33 6½	9 7½	3 4½	44 3½	12 8½
18	Light Industry	2 7½	43 11½	11 0½	3 2	53 3½	13 4½
19	Research Laboratory	2 9½	50 11½	13 5½	3 10½	71 1½	18 10
20	Workshop	2 1	40 6½	10 7	3 1	59 10	15 7½
21	Lorry Workshop	1 2½	26 2½	6 11½	1 5½	31 6	8 4½
22	Crane Shed	11½	40 0	8 9½	11½	41 10½	9 2½
23	Workshop and Canteen	2 7½	35 8½	10 10½	3 6½	47 5½	14 5½
24	Customs Shed	1 0½	23 4	6 11½	1 2½	26 10½	8 0
25	Stores and Workshop...	1 8½	34 5½	8 9½	2 1½	41 10½	10 8½
26	Light Industry and Offices	2 1	39 5½	12 0	2 8	50 3½	15 3½
27	Bottle Filling and Washing	2 1½	33 6½	9 3½	2 6½	39 10½	11 0½
28	Light Industry and Offices	1 9½	32 10½	9 5½	2 7	46 10	13 5½
29	Light Industry and Offices	2 2½	31 3½	9 6½	3 9½	53 1½	16 2
30	Lorry Garage	1 7½	37 5½	9 8	2 7½	61 1½	15 9½
31	Head Offices and Basement Air Raid Shelter	3 9½	51 3½	15 3	4 8½	63 11½	19 0½
32	Light Industry	1 8½	27 0	7 9½	2 0½	31 11	9 2½
33	Machine Shop and Stores	1 1½	35 0½	9 3½	1 10½	56 4½	14 11
34	Machine Tool Stores	2 1½	41 10½	10 1½	3 5½	68 11½	16 8
35	Light Industry	1 9½	29 10½	8 6½	2 2½	37 2	10 7½
36	Research and Offices	3 4½	45 1	13 10½	4 1½	55 2½	16 11½
37	Workshop and Offices	1 8½	38 4	10 11	2 2½	49 11½	14 2½
38	Light Industry	1 7½	41 5	11 1½	2 2½	56 4½	15 2½
39	Canteen (without Kitchen Equipment) ...	2 11½	60 11½	15 5	4 4	88 6½	22 4½

34 on Annex No. 5A. which is a 500-foot long, 60-foot wide, industrial building with a sub-storey under half its plan area, this sub-storey being let into an embankment so that half its volume only is below the finished ground level. All these three examples relate to projects with which I am personally familiar, and I can only say that the rates obtained by the application of the present rules seem to me to be about right in these cases.

Sixth, I refer to the storey-enclosure method of measuring roofs and whether the present rules are realistic in making no measurement distinction between flat, pitched or any other shape of roof. I must confess that the group is not yet entirely satisfied even whether it is proper to treat flat and pitched roofs similarly, for the reason that sufficient projects of a kind suitable for testing this question have not yet been available. For you will appreciate that, for a proper test, it would be necessary to have analysed storey-enclosure rates for several buildings which were similar in general construction, finish, floor loading, shape, storey heights, etc., some of which had pitched roofs and some flat roofs.

The difficulties are well illustrated by an investigation carried out by the group under which a pitched roof and a flat roof to a building 117 ft. 6 in. long and 27 ft. 10½ in. wide were each measured in detail and billed, priced at analogous rates, and totalled for comparison. The types of roof selected were:—

1. *the pitched roof*, consisting of 40 deg. pitch roman tiling, battens and felt on 4 in. by 2 in. rafters with normal collars, struts, etc.; intermediate party walls complete with two chimney stacks; 4 in. by 2 in ceiling joists and skim-coated plasterboarded ceiling, overlaid with strips of asbestos wool between the joists; the eaves being constructed with sprocket pieces, fascia, soffite board and gutters; and

2. *the flat roof*, formed of a 6 in. hollow tile structural slab covered on top with foamed slag screed and felt roofing and with two coats plain face plastering beneath; there are two chimney stacks and two small tank rooms with half-brick walls and 4 in. reinforced concrete roofs above the general roof level; and a 12 in. projection eaves slab 4½ in. thick was taken all round the roof.

The comparative price-rates for the roof works alone in these two cases, were found to be:—

Cube rates:—1s. 2¾d. for the pitched and 3s. 2¾d. for the flat roof.

Storey-Enclosure Rates:—6s. 8d. for the pitched and 8s. 2d. for the flat roof (these rates do not, of course, cover the cost of vertical supports beneath the roof and so are less than normal rates).

In the group's opinion, this test points to two main conclusions:—

1. that the RIBA cubing rules for the measurement of pitched and flat roofs are unrealistic; and

2. that because it can logically be maintained that the lighter pitched roof construction should be somewhat cheaper than the heavier fire-resisting flat roof construction with which it is in this case being compared, the storey-enclosure rules as now put forward by the group appear to be on reasonable lines when applied to pitched and flat roofs of similar construction.

The group, however, is well aware that these deductions rest upon only a single detailed comparison of two isolated types of pitched and flat roofs, and that what we are really after is that unattainable goal, a comparison between the *average* cost of *all* types of flat roof and that of *all* types of pitched roof. In this connection it is worth looking at the rates for blocks of flats with pitched roofs on Annex 3A as compared with those similar buildings with flat roofs; for if the cube basis was right all the "pitched roofer" rates in column 5 would tend to be higher than the "flat roofer" rates. The "pitched roofers" are buildings No. 2, 8, 10 (the West End flats), 12 and 16, so you can see that this is not the case. As regards vaulted and barrel type roofs, the group has not yet made any attempt to study and devise a method of allowing for their extra cost in the measurements and this factor under the present rules must still be assessed in fixing the price-rate.

Lastly, the group is well aware that the new system calls for measurements which are less simple than those required under the cube and floor-area methods: but in this case, where a choice lies between simplifying measurement (which is factual) and simplifying pricing (which is an art), the group has no hesitations in recommending the latter. Nevertheless, its members are continuing their researches with the aim of devising improvements in the system to make the measurements easier, without sacrificing the pricing advantages obtained under the present rules, and in this connection the group will welcome the wider research and constructive criticism which only the profession as a whole can give.

Application of the Storey-Enclosure System

As I mentioned earlier, various individual members of the study group, including myself, have for some time been using the new system for the preparation of approximate estimates in our own offices and we have found it practical and helpful, particularly after some experience in its use. But, when one has been used to roller skates for a long time, it is foolish to expect that the first time one dons ice skates perfect figure skating will be possible. There is a difference in technique between assessing cube and storey-enclosure prices, and before any of you put the Storey-Enclosure System into practice, I suggest you will find it helpful to apply the rules to several past contracts and study the resulting price-rates so as to get the general "feel" of the system. Thereafter, the new and old methods can be applied side by side—the resulting totals, ascertained respectively by cube or floor-area methods and by the storey-enclosure system form a useful crosscheck on each other—until you find you have gained confidence enough in the new system to use it alone.

Before leaving this aspect of our subject, I would like to address a word of warning to any who are not quantity surveyors. The prices set out in the Annexes to this Paper have been published solely to illustrate the theories I have endeavoured to explain *and these prices are not intended to form the nucleus of a cost information bureau for general use*.

Apart from the direct application of the Storey-Enclosure Rules to estimating, the group ventures to suggest that architects should find them helpful in solving at least one type of design problem, namely, which of a number of possible planning solutions to a particular project is likely to be the most economic. In such cases, provided the general construction, finish and site works of the alternatives are similar and provided a reasonable adjustment allowance is made for any differences there are likely to be in the cost of engineering services (in particular for lifts), a straight comparison of the total superfootages of each, measured in accordance with the rules, should generally give a good guide; the one with the lowest total being likely to be the cheapest.

ANNEX 6A: HOUSE BUILDINGS

Comparison of Cube, Floor Area and Storey-Enclosure Price-Rates

Ref. No.	Brief Description	Net Price-Rates for Buildings (excluding all Services, Drains and Site Works), converted to June, 1951, Datum			Gross Price-Rates for Appropriate Proportion of all Works in Tender, converted to June, 1951, Datum		
		Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure	Cube	Floor Area (measured over external walls—*not* M.O.H. Rules)	Storey-Enclosure
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1	3 Bed Semi-detached House	2 8	28 8	7 5½	3 7½	39 2½	10 2½
2	3 ,, ,, ,, ...	2 7½	28 8½	7 7½	3 4½	37 3½	9 11½
3	3 ,, ,, ,, ...	2 6½	28 4½	7 7	3 5½	38 1	10 2½
4	4 ,, ,, ,, ...	2 5½	27 3½	7 2½	3 2½	35 11½	9 5½
5	1 ,, mid-terrace bungalow	1 10	25 2½	6 7½	2 6½	35 1½	9 3
6	2 Bed mid-terrace House	2 1½	22 7½	6 3½	2 9	29 3½	8 1½
7	2 ,, semi-detached House	2 0½	22 7	5 10½	2 7½	29 1½	7 7
8	2 ,, ,, ,, ...	2 1½	22 9½	5 9½	2 9	29 7½	7 7
9	3 ,, mid-terrace House	1 11½	21 5½	6 4½	2 6½	27 9½	8 2½
10	3 ,, ,, ,, ...	2 0½	21 11	6 3½	2 7½	28 0	8 0½
11	3 Bed mid-terrace House	2 0	21 7	6 1½	2 7½	27 8½	7 10½
12	3 ,, ,, ,, ...	1 10½	20 4½	6 1	2 4½	26 3½	7 10
13	3 ,, semi-detached House	2 0½	22 6½	5 10½	2 7½	28 9	7 5½
14	4 ,, ,, ,, ...	1 10½	20 11½	5 7½	2 4½	26 1½	7 0
15	5 ,, ,, ,, ...	1 10½	20 10	5 6½	2 4	25 9½	6 10½
16	3 Bed mid-terrace House	1 10½	19 10½	6 0	2 4½	25 7½	7 8½
17	4 ,, semi-detached House	1 10½	19 10½	5 4½	2 4½	24 11½	6 9½

ANNEX 3B
FLATS BUILDINGS
DETAILS CONCERNING THE APPLICATION OF THE STOREY-ENCLOSURE SYSTEM OF APPROXIMATE ESTIMATING

ANNEX 3B

FLATS BUILDINGS

DETAILS CONCERNING THE APPLICATION OF THE STOREY-ENCLOSURE SYSTEM OF APPROXIMATE ESTIMATING

Ref. No.	Particulars of Project: Brief Description	Total No. of floors in the whole (or in the various parts) of the building	Roof: Shape	Roof: Type	Floors below ground: Ratio of Plan Area to ground floor ditto	Floors below ground: Proportion of volume below ground level	Particulars of Tender: Date	Gross Tender	Net cost of building only, excluding all services, drains and site works	Storey-enclosure area	Net Storey-enclosure rate excluding all services, drains and site works	Value of Services normally found within the Building, expressed as a Percentage of the Net Cost of the Building (Note: The value of any Lifts, Drains, Site Mains, etc., is excluded): Plumbing (excluding rainwater items)	Plumbing: Notes	Central Heating	Central Heating: Notes	Hot Water	Hot Water: Notes	Electrical Installation	Electrical Installation: Notes	Gross Storey-enclosure rate for all works in Tender
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
								£	£	Feet super	(10 ÷ 11) s. d.	Per cent.		Per cent.		Per cent.		Per cent.		(9 ÷ 11) s. d.
1	Bed-sit. and 1, 2, 3 and 4 Bed—Local Authority	1, 4, 6 and 7	Flat	Concrete	None		Dec. 1948	126,645	100,677	219,210	9 2¼	5	Includes Hot water	—	None		See Plumbing	2¼	Excludes fittings	11 6½
2	2, 3 and 4 Bed; Partly Maisonettes—Local Authority	3 and 5	Mansard and Pitched	Timber and Tiles	,,		,, ,,	30,758	24,177	54,923	8 9½	6½	,, ,, ,,	—	,,		,, ,,	8½	,, ,,	11 2½
3	3 Bed—Local Authority	8 and 9	Flat	Concrete	,,		Mar. 1949	96,109	77,100	188,539	8 2¼	6½		—	,,	1½		5¼	Excludes fittings, but includes fires and refrigerators	10 2½
4	Old People—Local Authority ...	3 and 4	,,	,,	,,		,, ,,	12,799	10,050	24,248	8 3½	9½		—	,,	3½		7¼	Ditto	10 6½
5	2 Bed—Local Authority	1, 3 and 4	,,	,,	,,		,, ,,	18,298	15,215	35,477	8 7	6½		—	,,	2		5½	Ditto	10 3½
6	4 Bed—Local Authority	1, 3 and 4	,,	,,	,,		,, ,,	11,436	9,680	24,086	8 0½	5¼		—	,,	2½		5	Ditto	9 6
7	3 and 4 Bed; Balcony approach—Local Authority	2, 3, 4 and 5	,,	,,	,,		Apr. ,,	78,656	61,678	145,816	8 5½	7	Includes hot water	—	,,		See Plumbing	9¼	Excludes fittings	10 9½
8	1 and 2 Bed—Local Authority ...	3	Pitched	Timber and Tiles	,,		July ,,	36,951	27,970	71,306	7 10¼	6½	Includes services to water heaters	—	,,		See Plumbing and Electrical	9¼	Excludes fittings, but includes water heaters	10 4½
9	2, 3 and 4 Bed—Local Authority ...	1, 2, 4 and 5	Flat	Concrete	,,		Nov. ,,	81,995	63,681	146,149	8 8½	7	Includes hot water	—	,,		See Plumbing	6½	Excludes fittings	11 2½
10	Small High-class West End—Private Client	7	Flat and Pitched	Concrete and Slates	100%	All	July 1950	40,400	25,575	36,892	13 10½	6¼		9¼	Gas-fired boiler; includes hot water		See Heating	3¼	,, ,,	21 10½
11	2 and 3 Bed—Local Authority ...	4	Flat	Concrete	None		Mar. 1951	76,253	65,736	133,079	9 10½	6	Includes hot water	—	None		See Plumbing	4½	,, ,,	11 5½
12	2 Bed—Local Authority	3	Pitched	Timber and Tiles	,,		Nov. ,,	85,630	60,008	156,542	7 8	13½	,, ,, ,,	—	,,		,, ,,	5½	,, ,,	10 11½
13	2 and 3 Bed—Local Authority ...	3 and 4	Flat	Concrete	,,		Dec. ,,	94,848	76,394	152,221	10 0½	6	,, ,, ,,	—	,,		,, ,,	3½	,, ,,	12 5½
14	1 and 2 Bed and Basement Stores, etc.—Local Authority	4, 5 and 6	,,	,,	37½%	All	Feb. 1953	99,981	72,611	144,132	10 0½	9	Includes services to water heaters	5¼	Background only	2½	By gas water heaters; (includes all gas services)	4½	Excludes fittings, but includes fires	13 10½
15	1, 2 and 3 Bed and Public Library—Local Authority	3, 4, 5 and 6	,,	,,	50%	,,	Apr. ,,	54,618	40,956	81,340	10 0½	7½	Includes services to water heaters	—	None	2¼	Ditto	3½	Excludes fittings	13 5½
16	2 Bed—Local Authority	4	Pitched	Timber and Tiles	None		July ,,	22,488	16,893	37,404	9 0½	9¼	Includes hot water	—	,,		See Plumbing	5½	,, ,,	12 0½

ANNEX 4B

SCHOOL BUILDINGS

DETAILS CONCERNING THE APPLICATION OF THE STOREY-ENCLOSURE SYSTEM OF APPROXIMATE ESTIMATING

Ref. No.	Particulars of Project: Brief Description	Total No. of floors in the whole (or in the various parts) of the building	Roof: Shape	Roof: Type	Floors below ground: Ratio of Plan Area to ground floor ditto	Floors below ground: Proportion of volume below ground level	Particulars of Tender: Date	Gross Tender	Net cost of building only, excluding all services, drains and site works	Storey-enclosure area	Net Storey-enclosure rate excluding all services, drains and site works	Value of Services normally found within the Building, expressed as a Percentage of the Net Cost of the Building (Note: The value of any Lifts, Drains, Site Mains, etc., is excluded): Plumbing (excluding rainwater items)	Plumbing: Notes	Central Heating	Central Heating: Notes	Hot Water	Hot Water: Notes	Electrical Installation	Electrical Installation: Notes	Gross Storey-enclosure rate for all works in Tender
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
								£	£	Feet super	(10 ÷ 11) s. d.	Per cent.		Per cent.		Per cent.		Per cent.		(9 ÷ 11) s. d.
1	Class Rooms, Changing Room and Masters Flat for Public School	1 and 2	Flat	Concrete	None		Mar. 1949	15,202	12,050	24,659	9 9½	7½	Includes games changing room	11	Gas-fired boiler; includes hot water		See Heating	3½	Excludes fittings	12 4
2	Primary for 840	1 and 2	,,	,,	6¾	All	July 1950	149,011	96,748	191,319	10 1½	4½		16½	Includes hot water and service mains between blocks		,, ,,	6	Includes power, wireless and fittings	15 7
3	,, ,, 800	1 and 2	Flat and slightly sloping	,,	None		Jan. 1951	124,725	84,457	154,051	10 11½	4¾		12½	Includes hot water		,, ,,	7½	Ditto	16 2½
4	,, ,, 520	1 and 2	Flat and sloping	Concrete and Steel Truss and Wood Wool	,,		Feb. ,,	86,747	60,453	111,837	10 9½	3		12¾	,, ,, ,,		,, ,,	9	Ditto	15 6½
5	Secondary Modern for 600 (completion contract)	1, 2 and 3	,,	Ditto	,,		Mar. ,,	197,820	108,808	192,570	11 3½	4		15	,, ,, ,,		,, ,,	7	Excludes fittings	20 6½
6	Further Education Workshop and Technical Block	1, 2, 4 and 5	Flat and North-light	Concrete and Glazing	12%	All	May ,,	116,985	80,315	152,799	10 6½	3½		18	,, ,, ,,		,, ,,	13½	Includes workshop power and fittings	15 3½
7	Primary for 240	1	Flat and slightly sloping	Steel Tees and Wood Wool	None		Aug. ,,	46,000	27,036	44,974	12 0½	7½		19	Excessive P.C.; includes hot water		,, ,,	8	Includes power, wireless and fittings	20 5½
8	,, ,, 560	½ and 2	Ditto	Ditto	,,		Jan. 1952	84,000	56,465	107,124	10 6½	6½		18	Includes hot water		,, ,,	6½	Ditto	15 8½
9	,, ,, 560	½ and 2	Ditto	Ditto	,,		,, ,,	91,137	58,563	114,707	10 2¾	8		18	,, ,, ,,		,, ,,	7	Ditto	15 10½
10	,, ,, 320	1, 2 and 3	Ditto	Ditto	,,		Mar. ,,	53,494	30,692	57,324	10 8½	7		15	,, ,, ,,		,, ,,	6	Make-up unknown	18 8
11	Secondary for 300	1 and 2	Flat	Concrete	6¾	All	,, ,,	102,467	70,869	121,241	11 8½	4¼		12	,, ,, ,,		,, ,,	8½	Includes power, wireless and fittings	16 10½
12	,, ,, 600	1 and 2	Flat and sloping	Concrete and Steel Truss and Wood Wool	None		May ,,	162,987	112,019	186,070	12 0½	2	Fittings and wastes only	15½	Includes hot and cold water and gas installation		,, ,,	9¼	Ditto	17 6½
13	,, ,, 300	1 and 2	,,	Ditto	12%	½ wholly sunk; ½ half ,,	July ,,	98,035	69,778	124,205	11 2¾	4		10½	Includes hot water		,, ,,	7¼	Ditto	15 9½
14	Primary for 520 (in 3 Blocks) ...	1	Flat and slightly sloping	Concrete and Timber Joists and Wood Wool	None		Feb. 1953	75,540	48,508	97,725	9 11½	6½		14½	,, ,, ,,		,, ,,	6½	Ditto	15 5½

ANNEX 5B

INDUSTRIAL BUILDINGS

DETAILS CONCERNING THE APPLICATION OF THE STOREY-ENCLOSURE SYSTEM OF APPROXIMATE ESTIMATING

Ref. No.	Brief Description	Particulars of Project: Total No. of floors in the whole (or in the various parts) of the building	Roof: Shape	Roof: Type	Floors below ground: Ratio of Plan Area to ground floor area	Floors below ground: Proportion of volume below ground level	Particulars of Tender: Date	Gross Tender	Net cost of building only, excluding all services, drains and site works	Storey-enclosure area	Net Storey-enclosure rate, excluding all services, drains and site works (10 / 11) s. d.	Value of Services normally found within the Building, expressed as a Percentage of the Net Cost of the Building (Note: The value of any Lifts, Drains, Site Mains, etc., is excluded): Plumbing (excluding rainwater items) Per cent.	Plumbing Notes	Central Heating Per cent.	Central Heating Notes	Hot Water Per cent.	Hot Water Notes	Electrical Installation Per cent.	Electrical Installation Notes	Gross Storey-enclosure rate for all works in Tender (9 + 11) s. d.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
								£	£	Feet super										
1	Sweet Manufacture	1	North Light	Asbestos and Glass	None		Oct. 1949	12,133	9,680	21,229	9 1½	—	By Client	—	By Client	—	By Client	3½	Includes fittings	11 5½
2	Chemical Processes	1, 2, 3 and 4	Flat	Concrete	25%	All	Dec. ,,	77,750	69,034	95,831	14 5	2½		—	,, ,,	—	,, ,,	—	By Client	16 2½
3	Transhipment Depot	1	Barrel Vault	,,	None		,, ,,	55,700	37,184	76,571	9 8½	—	None	14	None	—	None	14	Includes fittings	14 6½
4	Workshop	2	Flat	,,	,,		Feb. 1950	13,950	11,757	27,506	8 6½	2½		6	Includes hot water	—	See Heating	8	,,	10 1½
5	Factory Laboratory	1	,,	,,	,,		June ,,	7,423	6,110	10,227	11 11½	—	None	—	By Client	—	None	—	By Client	14 6½
6	Bottle Filling and Washing	1 and 2	,,	Metal Deck	8%	All	July ,,	51,065	40,824	87,634	9 3¼	2½		5½	Steam; includes hot water		See Heating	6¼	Excludes fittings; includes unit heaters and power	11 7¾
7	Workshop	1	Pitched	Asbestos	None		,, ,,	10,395	7,901	19,186	8 2¾	—	None	16	Includes steel boiler flue	—	None	3¾	Excludes fittings	10 10
8	Bakery and Offices	1 and 2	Pitched and Flat	Asbestos and Concrete	,,		Oct. ,,	91,434	67,434	166,819	8 1	3½		6	Includes hot water		See Heating	2¼	,, ,,	10 11½
9	Workshop	1	Pitched	Asbestos	,,		,, ,,	8,522	6,381	21,470	5 11½	—	None		See Electrical	—	None	11½	Excludes fittings; includes heating	7 11½
10	Warehouse	2	Flat	Concrete	,,		,, ,,	18,686	14,429	34,918	8 3½	2			,, ,,		See Electrical	5	Excludes fittings; includes hot water and (some) heating	10 8½
11	Precision Instrument Manufacture	1	,,	,,	,,		Nov. ,,	79,750	52,184	92,752	11 3	—	None	11	Includes hot water		See Heating	19½	Includes fittings and industrial power	17 2½
12	Stores	1	Pitched	Asbestos	,,		,, ,,	19,742	12,800	33,440	7 8	—	None	12	,, ,, ,,		,, ,,	4½	Excludes fittings	11 9½
13	Factory Offices	1	Flat	Concrete	,,		,, ,,	6,897	4,286	9,366	9 1¾	2½		10½	,, ,, ,,		,, ,,	7½	,, ,,	14 8½
14	Repair and Service Depot	3	,,	,,	,,		,, ,,	122,172	88,578	143,962	12 3½	2		16	,, ,, ,,		,, ,,	8	Includes fittings	17 1½
15	Bus Garage	1	Barrel Vault	,,	,,		Dec. ,,	32,426	23,237	63,903	7 3½	2½		7	,, ,, ,,		,, ,,	5	Excludes fittings	10 1½
16	Machine Shop	1 and 3	Flat	,,	,,		Mar. 1951	10,682	8,677	13,831	12 6½	2½	Includes services to water heaters	4½	Gas unit heaters; includes hot water		,, ,,	2½	,, ,,	15 5½
17	Hat Making and Offices	1, 2 and 3	Pitched	Asbestos	Very small	25%	Apr. ,,	23,878	18,071	38,518	9 4½	2½	Ditto	8½		1½	Gas water heaters	3½	,, ,,	12 4¾
18	Light Industry	3	Flat	Concrete	None		,, ,,	12,013	9,911	18,393	10 9½	2½		—	By Client	—	By Client	5	Excludes fittings; includes industrial power	13 0½
19	Research Laboratory	1 and 2	,,	,,	,,		June ,,	170,447	122,044	181,059	13 6	3		10½	Includes hot water		See Heating	8	Includes fittings	18 10
20	Workshop	1	Pitched	Asbestos	,,		Aug. ,,	12,288	8,329	15,754	10 7	2½		14	,, ,, ,,		,, ,,	14	Includes fittings and industrial power	15 7½
21	Lorry Workshop	1	,,	,,	,,		Sept. ,,	8,875	7,390	21,179	6 11½	2		12	,, ,, ,,		,, ,,	7½	Excludes fittings; includes industrial power	8 4½
22	Crane Shed	1	,,	,,	,,		,, ,,	37,891	36,209	82,420	8 9½	—	None	—	None	—	None	1½	Excludes fittings	9 2½
23	Workshop and Canteen	1 and 3	,,	,,	,,		,, ,,	23,176	17,434	32,081	10 10½	3		10	None	2	None	—	By Client	14 3½
24	Customs Shed	1	,,	,,	,,		Nov. ,,	57,397	48,587	139,825	6 11½	¾		—	None	—	None	7¾	Includes fittings	8 2½
25	Stores and Workshop	1	,,	,,	,,		,, ,,	14,950	12,292	27,283	9 0	2		—	,,		See Electrical	5	Excludes fittings; includes hot water	10 11½
26	Light Industry and Offices	1 and 2	Barrel Vault	Concrete	,,		Jan. 1952	59,700	46,815	76,116	12 3½	1½		11½	Includes hot water		See Heating	3	Excludes fittings	15 8½
27	Bottle Filling and Washing	2 and 3	Flat	,,	,,		Feb. ,,	24,991	21,023	41,840	10 0½	2½		—	By Client	—	By Client	—	By Client	11 11½
28	Light Industry and Offices	1	Barrel Vault and Flat	,,	,,		,, ,,	257,270	180,600	353,350	10 2½	2½	Includes water heaters and services to same	8	Gas unit heaters; includes gas to water heaters		See Plumbing and Heating	2½	Excludes fittings	14 6½
29	,, ,, ,,	1	Flat	Metal Deck	,,		Mar. ,,	103,341	60,836	118,200	10 3½	4½	Includes hot water	12½			See Plumbing	21	Includes fittings and industrial power	17 6
30	Lorry Garage	1	Pitched and Flat	Metal Deck and Concrete	,,		Apr. ,,	15,500	9,500	18,190	10 5¼	3		10	Electrical; includes hot water		See Heating	10	(Flame-proof) includes fittings. See heating	17 0½
31	Head Offices and Basement Air Raid Shelter	1, 4 and 5	Flat	Concrete	95% + areas	89%	May ,,	160,109	128,383	155,790	16 6	2		8½	Includes hot water		,, ,,	3½	Excludes fittings	20 6½
32	Light Industry	1	Pitched	Asbestos	None		June ,,	21,526	18,200	43,246	8 5	1½		7½	Gas unit heaters	½	Electrical	4	,, ,,	9 11½
33	Machine Shop and Stores	1 and 2	Flat	Asbestos Deck	,,		July ,,	139,877	86,950	173,578	10 0¼	¼		14½	Includes boiler for other buildings and hot water and steel boiler flue		See Heating	—	By Client	16 1½
34	Machine Tool Stores	1, 2 and 4	,,	Metal Deck	50%	50%	Sept. ,,	188,494	114,562	209,225	10 11½	2½		8½		1½		4½	Excludes fittings	18 0½
35	Light Industry	1	Barrel Vault	Concrete	None		Apr. 1953	120,335	96,729	210,006	9 2½	½		1½	Gas	—	None	1½	,, ,,	11 5½
36	Research and Offices	2	Flat	,,	Very small	All	Aug. ,,	77,400	63,232	84,337	15 0	3½	Includes hot water	9	Excludes boiler		See Plumbing	9½	Includes fittings	18 4½
37	Workshop and Offices	1	Pitched	Asbestos	,,	,,	,, ,,	283,920	217,845	369,338	11 9½	1½		12½	,, ,,		,, ,,	16½	Includes fittings and industrial power	15 4½
38	Light Industry	1 and 2	,,	,,	None		,, ,,	106,310	78,110	129,584	12 0½	1½		8½	,, ,,		,, ,,	12½	Ditto	16 5
39	Canteen (without Kitchen Equipment)	1	Flat	Concrete	,,		,, ,,	44,960	30,950	37,126	16 8	2½		10½	,, ,,		,, ,,	6¾	Includes fittings	24 2¼

ANNEX 6B: HOUSE BUILDINGS.—Details concerning the application of the storey-enclosure system of approximate estimating. (*See pages* 811-818).

Ref. No.	Brief Description	Particulars of Project: Total No. of floors in the whole (or in the various parts) of the building	Roof: Shape	Roof: Type	Date	Particulars of Tender: Cost of building, including sanitary, hot water, gas and electrical installations	Net cost of building only, excluding all services,	Storey-enclosure area	Net Storey-enclosure rate (excluding all services,	Value of Services normally found within this Building, expressed as a Percentage of the Net Cost of the Building (Note: The value of Drains, Site Mains, etc., is excluded): Sanitary and Hot Water Installations Per cent.	Sanitary and Hot Water Installations Notes	Gas Installation Per cent.	Gas Installation Notes	Electrical Installation Per cent.	Electrical Installation Notes	Storey-enclosure rate for building, including sanitary, hot water, gas and electrical installations and its appropriate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
						£	£	Feet super								
1	Detached Bungalow	1	Pitched	Tiles	Jan. 1952	2,250	1,800	1,200	30 0	5	Includes hot water	2	Gas unit heaters	3	Includes fittings	40 0
2	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
3	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
4	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
5	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
6	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
7	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
8	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
9	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
10	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
11	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
12	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
13	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
14	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
15	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
16	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
17	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
18	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
19	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
20	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
21	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
22	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
23	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
24	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
25	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
26	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
27	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
28	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
29	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0
30	Detached House	2	,,	,,	,, ,,	3,000	2,400	1,600	30 0	5	,, ,,	2	,, ,,	3	,,	40 0

ANNEX 6B: HOUSE BUILDINGS.—Details concerning the application of the storey-enclosure system of approximate estimating. (*See pages 811–818*).

Ref. No.	Particulars of Project: Brief Description	Total No. of floors (if on the various parts of the building)	Particulars of Tenders: Roof Shape	Roof Type	Date	Cost of building, including sanitary, hot water, gas and electric installations and as appropriate drains, service mains, etc.	Net cost of building only, excluding drains and site works	Storey-enclosure area	Net Storey-enclosure rate (excluding drains and site works)	Value of Services normally found within the Building, entered as a Percentage of the Net Cost of the Building (Note: The value of Drains, Site Mains, etc., is excluded): Sanitary and Hot Water Installations Per cent.	Notes	Gas Installation Per cent.	Notes	Electrical Installation Per cent.	Notes	Storey-enclosure rate for the building (excluding drains, sanitary, hot water, gas, electrical installations and site works) and its appropriate proportion of site works, drains, service mains, etc.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
						£	£	Feet super	£ s. d.							£ s. d.
1	Three bedroom semi-detached house	2	Hipped	Timber and Tiles	Nov. 1950	1,977	1,445	4,362	6 7½	9	Including independent boiler	½	Excluding fires and cooker	2½	Excluding light fittings	9 0½
2	" " " "	"	"	"	" "	2,346	1,728	5,084	6 9½	9½	"	"	"	2½	"	9 0½
3	" " " "	"	"	"	" "	2,508	1,852	4,452	6 9	7½	"	"	"	2½	"	8 5½
4	Four bedroom semi-detached house	"	"	"	" "	2,213	1,679	5,251	6 4½	7½	"	"	"	2½	"	8 5½
5	One bedroom mid-terrace bungalow	1	"	"	Jan. 1953	1,048	752	2,096	7 2	12½	Including gas water heater		"	4	"	10 0
6	Two bedroom mid-terrace house	2	"	"	" "	1,425	1,100	3,246	6 9½	10½	Including back boiler		"	3½	"	8 9½
7	Two bedroom semi-detached house	"	"	"	" "	1,445	1,121	3,522	6 4½	10	"		"	3½	"	8 2½
8	Three bedroom " "	"	"	"	" "	1,385	1,065	3,399	6 3½	10	Including independent boiler		"	4	"	8 1½
9	Three bedroom mid-terrace house	"	"	"	" "	1,502	1,161	3,378	6 10½	10½	"		"	3½	"	8 10½
10	" " " "	"	"	"	" "	1,559	1,220	3,587	6 9½	10	"		"	3½	"	8 9½
11	" " " "	"	"	"	" "	1,499	1,165	3,527	6 7½	10½	Including back boiler		"	3½	"	8 6
12	Three bedroom semi-detached house	"	"	"	" "	1,425	1,104	3,361	6 6½	9½	"		"	3½	"	8 3½
13	Four bedroom semi-detached house	"	"	"	" "	1,455	1,127	3,440	6 6	10	Including independent boiler		"	4	"	8 6½
14	Five bedroom semi-detached house	"	"	"	" "	1,930	1,470	4,843	6 4	8½	"		"	4½	"	7 6½
15		"	"	"	" "	1,879	1,519	5,057	6 0	8½			"	4½	"	7 5½
16	Three bedroom mid-terrace house	"	"	"	" "	1,334	1,036	3,196	6 5½	10	Including back boiler		"	3½	"	8 3
17	Four bedroom semi-detached house	"	"	"	Nov. 1953	1,665	1,278	4,378	5 10	9½	"		"	3½	"	7 4

IN PARLIAMENT

The Planning Bill

ON April 29, Standing Committee C of the House of Commons, gave further consideration to the Town and Country Planning Bill.

On Clause 4 (Payment where development charge incurred by claimholder or his predecessor in title (Case A)), MR. HOROBIN moved an amendment to make sub-section (3) of the Clause read as follows:—"The principal amount of a payment made in respect of a claim holding by virtue of this section shall not exceed the value of the holding." He said that the Minister had based himself, rightly, throughout the Bill on the lines that the existing damage to owners must be met before being attached to land remains of claims out of which it was possible to meet damage which never might arise. If the principle were accepted it surely should be written into the Bill that whatever did or did not happen before any allocation took place, the amount of development which had been paid should come out of the established claim.

The amendment did not ask or imply that anything more than the established claim should in any case be met. The difficulty was that nobody knew on what basis these assessments were made. There simply was a claim and there was a development charge. Nobody could say that the amount of the development charge was in respect of the bit of land which at the time, all in one ownership, was undeveloped, and another bit of it was in respect of the piece of land, still in the same ownership, which was at the time developed. Nobody could say that of a £500 development charge, part of it was in respect of increase of value to the house that was already there, and part of it was in respect of the vacant land which now had a house on it. Therefore, though the total might be quite sufficient to repay the development charge which had been paid, if the allocation was made before that was done it might be found that a man who had received actual damage would not be recouped in favour of somebody who might never receive damage, but who would have an allocated part of the claim attaching to his land. It was with the object of raising that possibility and ascertaining whether it was one that should be safeguarded that he put down his amendment.

MR. MACMILLAN, the Minister of Housing and Local Government, said he had a good deal of sympathy with the amendment, and he would look at the points made with special care. The amendment dealt with the problem of what might be called the split or allocated claim. It was broadly true that the Ministry's general purpose was to recoup a man for actual damage suffered before they took note of the possible provisions made to deal with some future damage which the man might or might not suffer. Nevertheless, it was part of the principle of the scheme that the payments in respect of a piece of land should be limited to the 1947 development value of the land as represented by the established claim. That was the Ministry's principle, for good or ill.

Put one way round, the case for the amendment was rather strong, but the committee should examine what would be the effect from another point of view if it were accepted. Suppose that on July 1, 1948, a man owned two identical plots and established for them a claim of £600. Three years later, the man built a house on one of the plots and paid a development charge of £400. Under the Bill as drafted, the payment due to the man would be limited to the part of the claim relating to the plot on which he had built—that was to say, £300, plus the interest. That was all he would get back—not £400, but the £300. The other £300 of his claim would attach to the second plot and would only be paid to him in compensation if later the land was compulsorily acquired or planning permission to develop it were refused. If the amendment were carried, £100 from plot B, so to speak, would be appropriated for use in connection with plot A, on which the development charge of £400 had been paid, and only £300 of the claim existed to meet it. That would mean that only £200 remained for the compensation purposes of the other plot.

Alternatively, if the owner was free to sell the plot for development, and planning permission was given, he would then have realised its market value as well as £100 of the claim relating to it. This would rather cut across the principle on which they had tried to work that the repayment should be not the development charge but the claim on the particular piece of land. Although it was not really an argument, that would be discriminating in favour of large owners against the small owners. A man who owned only the land which he developed would continue to be limited to the amount of claim which was relevant to the land, whereas a man owning a much larger estate would do an operation which one might call borrowing from the bank of a larger established claim to recoup himself for one bought out of another, which, perhaps, he had no intention of developing. Although he saw the point, which did not often arise in these claims, he feared that to accept the amendment would be to lead to something which would sin more against the general principle that the Government had adopted than the benefit of curing any trouble by accepting the amendment would warrant.

The amendment was, by leave, withdrawn and the committee adjourned.

OTHER BUSINESS

Historic Buildings In Scotland

On April 27, MAJOR ANSTRUTHER-GRAY asked the Minister of Works how many applications for assistance had been made to the Historic Buildings Council for Scotland; and how many of these had been granted.

SIR DAVID ECCLES said that the Historic Buildings Council for Scotland had received 43 applications, and so far he had approved 12 grants.

Answering further questions SIR DAVID ECCLES said that 17 applications were still under consideration. The others had been refused on what he believed to be good grounds.

New Town Development

On April 27, MR. GEORGE THOMSON asked the Minister of Housing and Local Government if he would set up a working party containing departmental, local authority and new town corporation members to consider the machinery for the transfer of new town development corporations to local authority status.

MR. MARPLES replied in the negative, stating that the Minister did not think that this would be appropriate at present.

MR. THOMSON asked if this was not an important and complex problem which was already beginning to loom large in some of

the new towns. Would the Under Secretary look at it again, to see if it could be investigated, in good time?

MR. MARPLES said he agreed that it was complex and complicated, but the provision for the winding up of the development corporations and the transfer of the undertakings to the local authority was laid down in the New Towns Act. The Minister did not think the time was ripe for the appointment of a working party.

Nursery Schools

On April 27, MR. HOY asked the Secretary of State for Scotland what plans he had for building nursery schools: and if he would state the programme for the next two years.

MR. J. STUART said that restrictions on the provision of new nursery schools imposed in 1948 must continue so long as it was necessary to concentrate the available resources on providing urgently needed primary and secondary schools and technical education centres.

Scottish Loans

On April 28, MR. PRYDE asked the Secretary of State for Scotland what amount of money had been paid by local authorities in Scotland to the Local Government Loans Board as interest on housing loans from 1922 to 1952.

MR. BOYD-CARPENTER, Financial Secretary, Treasury, said he assumed that the hon. member had in mind payments to the Public Works Loan Board, whose loans were financed from the Local Loans Fund. The amount paid to the Board by local authorities in Scotland as interest on housing loans from April 1, 1922, to March 31, 1953, was £36,174,977.

Local Building By-Laws

On April 29, MR. PITMAN asked the Minister of Housing and Local Government which local authorities had not so far adopted the model building by-laws issued 12 months ago; and what action he proposed to take.

MR. MACMILLAN said that of the 1,336 local authorities whose old building by-laws expired this year, 1,321 had adopted by-laws based on the model, 4 had drafts under discussion with him, and 11 had not prepared drafts. He had written to the 11.

Factories Built

On April 29, MR. JAY asked the President of the Board of Trade how many Government-financed new factories or extensions had been built in development areas under the Distribution of Industry Acts since 1945, and how many were now unoccupied.

MR. HENRY STRAUSS said that by March 31, 1954, 764 factories and extensions of over 1,000 sq. ft. had been completed. Ten factories (including three very small ones) were at the moment unoccupied. The figure of ten included factories leased to tenants but immediately available for reallocation to new tenants.

Marketing of Timber

On April 30 MR. BALDOCK called attention to the deteriorating market for home timber and the ill-effects that an uncertain market was bound to have on the future planning programme. He said there was much criticism of the poor quality of home-grown timber, but that was the result of the vicious onslaught on the forests which had taken place in the two world wars. A forestry advisory service could do much to eradicate the prejudice and to effect an improvement in the matter. There were strong objections to an Exchequer subsidy, but the Government should consider imposing an import levy on imported timber, which represented 90 per cent. of the timber now used. Even if it were very low the levy would provide sufficient finance to make the home timber industry more remunerative and stable, and would encourage further planting. More could be done by the nationalised industries to support the home industry. The Government could also consider giving a grant or loan for the establishment of pulping factories where thinnings could be pulped for use in newsprint.

COLONEL CLARKE, in seconding, said it was unfortunate that British architects almost invariably stipulated the use of foreign timber, and that the British Standards Institution were a little hard on British timber.

SIR THOMAS DUGDALE, Minister of Agriculture, replying to a brief debate, said that during the past few months the market had shown a welcome steadiness in prices and to-day the British timber-growing industry was in a better position than in 1939. There was still much high-quality timber available. The appointment had now been made of the members of the departmental committee which was to advise on measures which might be taken within the home industry to improve arrangements for the marketing of produce from privately owned woodlands. Besides the chairman, Mr. Hugh Watson, Deputy-Keeper of the Signet, the following would serve: Mr. H. Collison, general secretary, National Union of Agricultural Workers, Mr. John Corbett, FCA, Mr. Norman French, Colonel Sir Eric Gore-Browne, Sir Patrick Laird, Mr. Charles Rhys, and Professor H. M. Steven, MA, Ph.D, Professor of Forestry, University of Aberdeen. Suggestions for helping the timber industry by a levy subsidy or on the lines of the Wheat Act, 1932, raised wide issues affecting import arrangements, and there was not much hope of dealing with the problem on those lines. A committee had been set up to consider grading rules for timber.

Repairs and Rents Bill

The second reading of the Housing Repairs and Rents Bill in the House of Lords was debated on May 4. A summary of the debate will appear in next week's issue.

In the Commons on May 3 MR. ARTHUR LEWIS asked the Attorney General whether he would take steps to amend the present system of free legal aid so as to enable any tenant, irrespective of income, to avail himself of the opportunity of free legal aid in contesting his landlord's claim for increased rent, as proposed in the Bill.

SIR LIONEL HEALD replied in the negative.

FIRE PREVENTION IN TEMPORARY HOUSES

New Ministry Circular

CIRCULAR No. 37/54, "Temporary Houses: Fire Prevention," issued by the Ministry of Housing and Local Government, states that it has been brought to the Minister's notice that some fires in temporary houses have been caused by electrical installations, and he thinks it desirable to remind local authorities of the recommendations in Circular 83/50 that inspections and tests of electrical installations should be made at regular intervals. The intervals should normally be 14 months.

Inspections of this frequency should reduce the risk of fires attributable to faults in electrical installations; and the choice of an interval of 14 months will ensure that over a period the installation in each bungalow will be tested under different loads, in so far as these depend on the season. An inspection should be made as soon as possible if none has been carried out within the last 14 months.

The Minister is advised that particular attention should be paid to the following matters:—

Bakelite Moulded Components in Main Control Panel.—There have been reports of persistent arcing or permanent "tracking," particularly on the fuse blocks. These usually follow repeated deposits of carbon, etc., on the bakelite as a result of the "blowing" of fuses or intermittent arcing between conductors. Where it is found that the non-hygroscopic surface of the bakelite has been destroyed the component should be renewed. If renewal of the fuse block is necessary it is recommended that ceramic-type fuse-holders be substituted. This may necessitate a new mounting-bar and alterations to, or the renewal of, the insulating "cut-out" surrounding the fuses.

Overheating of Fuse Contacts.—One type of fuse-holder incorporates small spiral springs to provide pressure to the contact surfaces. Overheating of the fuse renders the springs less effective and may cause serious overheating. Defective fuse-holders should be renewed.

Fuse Terminal Connections.—Overheating due to a bad connection to a fuse terminal has also caused fires. The risk is greatest in the cooker circuit and others that are heavily loaded. In some cases all that is required is to tighten up the grub-screws. In others the connection is bad because a pointed grub-screw has been used and has passed between the strands of the cable instead of clamping them down to the terminal: it may be possible to put this right by removing the point of the screw with a file.

Arcing on to Metal Cover.—Arcing between fuse conductors and the earthed metal cover can be prevented by fixing a thin sheet of fibre or some other suitable insulating material to the affected area on the inside surface of the cover.

Cable Insulation in the Control Panel.—The rubber or pvc insulation of the cables in the control panel should be examined for excessive deterioration due to overheating. The remedial measures will depend upon the extent of the deterioration: if only the cable ends in the control panel are affected it may be sufficient to use a pvc sleeving over the defective insulation.

Socket-outlets and Switches.—In some instances these are housed under metal cover plates which will not accommodate the conventional type of socket or switch interior. Improvision may therefore be necessary when they are renewed and any such work carried out since the last inspection should be tested to ensure that the modified installation is safe.

On the first inspection a check should be made that the cables in the roof space are not in contact with the flue pipe or heating ducts unless, of course, that has already been done.

Any proposal to carry out remedial works to the electrical installation in a temporary house at a cost of more than £5 should be referred to the Principal Regional Officer.

BRITISH INDUSTRIES FAIR

Renewed Confidence at Castle Bromwich

A RENEWED faith in the value of being represented at the British Industries Fair was noticeable at Castle Bromwich last Friday, when the Press had their usual preview of the engineering and hardware sections of the Fair. This attitude is in marked contrast to that shown by a number of exhibitors, particularly firms manufacturing fittings and equipment for the building industry, in the past two or three years, who had voiced the feeling that the numbers of orders obtained did not justify the expense and trouble occasioned by exhibiting at the BIF. This year, however, marks the return of a number of exhibitors who had fallen out, and who have since come to the conclusion that they cannot afford not to be represented at this unique annual occasion for displaying the products of British industry to the world.

An interesting feature of this year's Fair that tends to confirm the greater confidence of exhibitors is that more affirmative replies have been received from overseas buyers in response to the mailing campaign than at the same time last year. Before the official opening, on Monday, over 4,000 overseas buyers had stated their intention of visiting the Fair, which is an increase of nearly 10 per cent. compared with last year, and altogether three or four times that number are expected to pay a visit before the end of the Fair.

This year's Fair is the last to be held under Government aegis, and, as announced last week, British Industries Fair, Ltd., has now been set up to take over the organisation of the 1955 and subsequent Fairs. This will have little effect on the Castle Bromwich section, however, which has always been a private enterprise show organised by the Birmingham Chamber of Commerce. This was pointed out by MR. A. B. WARING, chairman of the Fair Management Committee, in an address of welcome to the Press, who referred to the repercussions on the BIF of the implementation by the Government of the Goodale Report. The Birmingham section, he said, had stood up to this inquiry "in a remarkably satisfactory manner," and neither its constitution nor its method of organisation had been altered in any way whatsoever.

Mr. Waring said that, as far as Castle Bromwich was concerned, there was no doubt that the overwhelming majority of exhibitors were well satisfied that on all counts the Fair was of the greatest advantage to them, and had lost nothing of its prestige or appeal. This year there were over 1,000 exhibitors at Castle Bromwich, and all space was fully occupied. It was their intention to expand the Fair, and to this end long-term plans had been prepared for additions to the buildings.

Delivery and Price

A tour of the Fair at Castle Bromwich showed that exhibitors had this year made substantial progress in getting their stands ready to view by the Press, and not nearly so many products were concealed behind blank walls of hessian as heretofore. The greater visibility afforded did not, however, reveal much that was startlingly new, and it was apparent that manufacturers have largely concentrated on improved versions of established products. The prices of goods shown are, however, stated to be lower in many cases, and delivery dates are earlier and firmer than since before the war.

The outdoor section again comprises a wide selection of contractors' plant and equipment, including heavy earth-moving equipment, road-making machinery and concrete mixers. A number of types of sectional building are also displayed, included in which, and exhibiting at the BIF for the first time, is the Unimer organisation (on the stand of E. H. Smith (Westhaven), Ltd., 1, Sherborne-road, Acocks Green, Birmingham, 7), which comprises ten distributors who are marketing tubular steel buildings in the various geographical regions of England and Wales. The buildings sold by this organisation are of tubular steel construction and are designed to take full advantage of the advances made in recent years in the use of tubular steel for structural purposes. Wall infilling can be varied to suit the particular purpose for which the building is required. J. C. Bamford, Lakeside Works, Rocester, Uttoxeter, Staffs., are showing for the first time at the BIF a tractor-mounted, hydraulically operated excavator, capable of digging 11 ft. deep. It will load wagons 12 ft. high, and reach 15 ft. It is said to have great scope in the building industry.

Under cover, exhibitors rely mainly on a straightforward presentation of their wares, as seems fitting to the occasion. A stand that catches the eye is that of the Bracknell Development Corporation, who are showing models, photographs and maps of the new town with the object of explaining its advantages for new industries.

Gas Turbine Engine

The Rover Company are showing the first small gas turbine engine to go into production in this country. It is emphasised that it is designed for industrial use and not for cars. This engine is expected to have many industrial uses, and may well find a particular application in the building industry. Known as the 1S/60 gas turbine, it is rated at 60 bhp, and among the advantages claimed for it are its low weight and bulk: greater reliability; complete absence of vibration; use of any distillate fuel; easy starting from cold; small consumption of lubricating oil; and smokeless exhaust. The disadvantages are listed as higher fuel consumption and sensitivity to changes in air temperature.

In the heating section, Chatwins, Ltd., Market and Phœnix Foundries, Tipton, Staffs., are showing for the first time at the BIF a solid fuel cooking appliance that will also heat four radiators, and is claimed to be the first cooker that can also provide actual space heating on any scale.

An advance in the design of paint rollers is shown by Dawson McDonald and Dawson, Ltd., Compton Works, Ashbourne, Derbyshire, who are exhibiting a power-fed paint roller which is claimed to give continuous use for two gallons of paint in a regular flow with with even application; it eliminates time lost in dipping and evening out irregular work. B. Heyman, 122, Bethune-road, N16, are showing a wall-patterner device, incorporating a set of rollers in a container, that prints and embosses walls, ceilings, boards, and other surfaces.

Exhibited by W. Kennedy, Ltd., Station Works, West Drayton, Middlesex, is a portable power hacksaw machine which is claimed to be the smallest and lowest priced power saw in the world, and to cover the field between a handsaw and the relatively costly power sawer. Immediately after the BIF it is to be shown at the Toronto Fair.

On their stand at the British Industries Fair, Castle Bromwich, the Bolton Gate Co., Bolton, Lancs, are exhibiting a series of doors. Several are designed to aid industrial efficiency and cut down waste time in interfactory traffic and movement. In this category there is the Bolton patent shutter door which automatically opens on the approach of a vehicle or pedestrian, and shuts itself afterwards. It is actuated by an "invisible ray" whereby the breaking of a light barrier closes the circuit to start the operating mechanism. The same door is also shown using push-button control or floor-level contact plate, closing being effected by a time switch. This door is fire-resistant and has successfully passed tests conducted by the Department of Scientific and Industrial Research and the Fire Offices Committee Joint Fire Research Organisation. A range of products varying from bar-counter grilles to armour-plated doors is included, and many of them will be demonstrated with alternative methods of control, e.g., manual, push-button or photo-electric. (Stand No. B, 302.)

On the stand of Rapid Metal Developments, Ltd., Birmingham, 22b, visitors can see various applications of Rapid Metal formwork and allied equipment. Climbing shuttering (both the double face and cantilever types) is also demonstrated, together with flexible panels for circular concrete construction. Another interesting feature is the SL adjustable centering girder. The strength and rigidity of this girder can be easily demonstrated. The company are also exhibiting the square-edge road form (which was designed for use particularly on granolithic floors where a sharp arris is required on the concrete) standard types of road form, adjustable props and trench struts. (Stand 1322, Outdoor.)

The BIF remains open until May 14.

"SPACE FOR INDUSTRY"

LCC Exhibits at the BIF

ON MAY 3 the chairman of the LCC and Mrs. Victor Mishcon visited the BIF at Olympia, accompanied by Mr. I. J. Hayward (Leader of the LCC), Mr. W. G. Fiske (chairman of the Town Planning Committee), Mr. A. Reginald Stamp (chairman of the Housing Committee), Mr. Patrick Stirling (member of the Town Planning Committee), and other representatives of the Council, where they first saw the Council's stand. This has been designed to illustrate the problems of London and its future development and the contribution which the movement of industry, as well as population, to out county estates, expanded towns and new towns could make towards the solution of these problems of living and working in London.

THE BIF "DESIGN CENTRE"

CoID's Selective Display of Merchandise

THE news that the Council of Industrial Design has a pitch at this year's BIF pricked up tired ears. One greets BIF-time with a rather guilty feeling of unenthusiasm. In my case, this is probably because of early memories in which it is inseparably associated with Big Business, that Never Never Land haunted by a not unamiable villain, Captain Hook, who beats one down over design fees

while twitting one with "artistic improvidence" and inviting one to admire the elasticity of his expense account.

Much has happened to both me and Hook since then. Later and closer acquaintance with individual members of his buccaneer band reveal them often to be romanticists, perennially adolescent and generally vastly impractical and needing help. Between worrying about their balance-sheets, as well as one's own, one realised that the hardest part was arguing the toss about design with a chap who says, metaphorically speaking, "I wish I had the courage to go to the Stock Exchange in a tie like that," particularly when good manners forbade one to answer "so do I."

The point, and the rather sour cream of the elaborate joke, is that Big Business will continue to regard designers as long-haired long after both of them are bald as eggs, but it is his growing suspicion that the foreign gentleman with the built-in brief-case is also inconveniently interested in the look of things, as well as their price and delivery-date, which makes it odd that the business man doesn't do something businesslike about it.

This always seems to come to the surface at the BIF. There is still too much of the pretentious, the dated, the ugly and the downright shoddy to be seen there—and far too badly presented—for the sake, apparently, of an imaginary "public." As the Director of the CoID himself has said, good design is only a factor, though an important one, in the *quality* on which we depend for our exports. Big Briefcase is presumably here to look for it, and he needs help.

It is partly a matter of showmanship: shortcomings cannot always be screened by well-tailored backs. The sherry-sanctum runs dry, and evasive action "until our technical chap gets here, old boy," isn't always effective. But these are faults of an amateur cast which can to some extent be mitigated by good production and show-mounting. In the final analysis, it is what is shown that counts, and (as Gordon Russell put it in a nutshell) there are more people on one's own side of the counter who care what things look like, as well as how they work and what they cost, than Big Business cares to admit, and they are hard-boiled.

This being so, the BIF surely ought always to have had the benefit of expert selection and showmanship. As has been amply proved, the CoID is now our national expert in those techniques, and a really businesslike Big Business would cash in on the fact. This year, for the first time (and the last "under present management" of the BIF), the Council has staged a selective display at the BIF for which the criterion has simply been that of good design. Its "Design Review," initiated for the Festival, once more proves its value as a stocklist, setting by implication a hall-mark on some 350 items under the headings of Building Fittings; Floor Coverings; Cutlery and Tableware; Office Equipment; Domestic Appliances; Fashion and Furnishing Fabrics; Light Fittings; Pottery and Glass; Toys; Travel Goods; and Timepieces and Jewellery. It is the reverse of discredit to the CoID that these represent design standards now fairly familiar to people who know where to look; the BIF is also for people who don't, but know what they want when they see it.

"BIF Design Centre" is designed by Neville Conder, who from long connection with the BIF will know what Big Business wants and, as a designer, how to present it to Big Briefcase. Let us hope this may be a Shape of Things to Come as well as a punctuation-mark in BIF's history.

The Centre is situated at stands R, 12 and 13 at the Earls Court, London, section of the Fair.

BASIL MARRIOTT.

CLERKS OF WORKS' INSTITUTE

Annual Meeting and Dinner

THE 72nd. annual general meeting of the Institute of Clerks of Works of Great Britain (Inc.) was held at the RIBA, on April 10. A large number of members attended the meeting including many delegates from Northern Ireland, Scottish, North and North-West of England and Midland Chapters. The retiring president, Mr. F. H. Peck, ARSanI, opened the meeting and conducted the business up to the time of installing his successor Mr. H. J. Hallett, who on occupying the presidential chair presented the badge of vice-president to Mr. S. F. Hassell. Mr. G. W. Harris was reappointed editor of the Journal, and the examination board and the honorary trustees were re-elected *en bloc*.

The re-election of Mr. W. J. Gibbins as general secretary was warmly welcomed.

The annual dinner which followed the meeting was held at Church House Restaurant, Westminster. The new president, Mr. H. J. Hallett occupied the chair and Mr. Howard Robertson, president, RIBA, was the guest of honour.

MR. HOWARD ROBERTSON proposed the toast of the "ICW." Speaking of how the good relationship between the clerk of works and the builder fostered good relationship between the architect and builder, Mr. Robertson recalled the advice given to him, in his student days and how techniques and materials had changed, but the clerk of works' duty in maintaining a high standard of work was the first consideration.

The toast was reponded to by MR. H. J. HALLETT. The progress of the ICW said Mr. Hallett, was due in no small way to the enthusiasm of the Chapters. The examinations encouraged the right type of man to become associated with the Institute. The retiring president, Mr. F. H. Peck, then invited Mr. Howard Robertson to present the certificates of Fellows of the Institute to Mr. H. J. Hallett and Mr. F. Stanger, who had been elected to this status at the AGM earlier.

ALUMINIUM HANGAR DOORS

New Installation at London Airport

AT London Airport, the erection and installation of the first of four pairs of "Templex" aluminium alloy hangar doors were recently completed. These doors are for the large hangars which form part of the BOAC Headquarters.

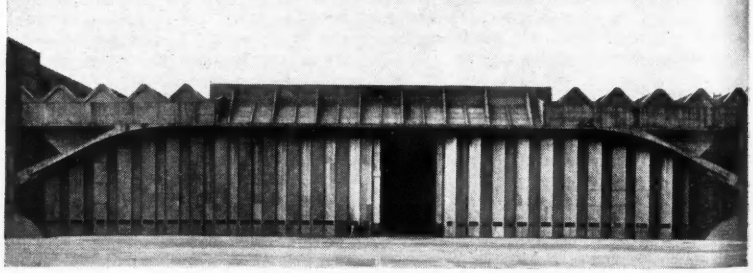
Head Wrightson Aluminium were nominated by the Air Ministry as sub-contractors to W. and C. French, Ltd., the main contractors for the hangars, to undertake the construction and erection of these four pairs of doors. The doors were designed specifically for the four reinforced concrete maintenance hangars being built by the Ministry of Transport and Civil Aviation for British Overseas Airways Corporation, to the design of Sir Owen Williams and Partners.

These doors are electrically operated and are designed for both folding and sliding. Each door opening is 46 ft. high and 300 ft. long in the clear, and in each hangar the doors are in two halves, sliding back from the centre. When fully opened, each half-door folds into a recess at the side of the door opening, giving unimpeded access over the whole length of the building.

Other than the mild steel top and bottom runners, draught-excluding flaps, fittings, etc., the doors are made entirely of aluminium alloy. The total tonnage of aluminium which will be used in the four pairs of doors amounts to 195. For the sections Noral 51SWP (BS1476 HE10) was chosen and BA60 (BS1470 NS3) for the Rigidal Mansard Sheets. The alloy BS1473: NR6-M was specified for the rivets.

The following is a list of suppliers and sub-contractors:—

Aluminium alloy sections, Northern Aluminium Co., Ltd.; Rigidal aluminium mansard sheets, British Aluminium Co., Ltd.; aluminium rivets, J. Stone and Co. (Deptford), Ltd.; supply of power unit assemblies, Pickerings, Ltd.; top and bottom track steelwork, traction units, H. Pickup, Ltd.; electrical wiring, Electrical Installations, Ltd.; wire ropes, British Ropes, Ltd.; Georgian wired glass, Pilkington's, Ltd.; union door locks, Josiah Parkes and Sons, Ltd.; patent open steel flooring, Lionweld, Ltd.; fibreglass resin bonded slabs, Fibreglass, Ltd.; Rubazote, Expanded Rubber Co., Ltd.



View of one of the hangars showing the first pair of "Templex" aluminium alloy doors to be completed. The scale of the doors may be gauged by the human figures.

The Builder

CURRENT PRICES OF MATERIALS

THE information given on these pages has been specially compiled for *The Builder* and is copyright. It is the intention that the details given should indicate fair average prices of materials not necessarily the highest or the lowest. The prices apply to large quantities of materials loaded at works, delivered at London Stations or at site in London Area as stated. Prices for smaller quantities ex merchant's warehouse will necessarily be higher so as to include the stocking and handling costs involved. Due to the exceptional circumstances now prevailing it is recommended that the prices of materials should be confirmed by inquiry from suppliers and merchants.

AGGREGATES AND SAND

Delivered site in full lorry loads. Average of prices for Boroughs of Westminster, Paddington, Holborn and St. Pancras.

		£	s.	d.
Pit Ballast	per yd.	1	1	5
Pit Sand	,,	1	0	5
Washed Sand	,,	1	2	3
¼ in. Shingle	,,		18	11
¼ in. Broken Brick	,,		19	3
Pan Breeze	,,		9	6
Fine or Coarse Foamed Slag Aggregate	per ton	2	18	1
2 yds. of fine and 2.6 yds. of coarse per ton				

CEMENT, etc.

Including non-returnable jute sacks or paper bags.

		£	s.	d.
Best British Portland Cement. Standard Specification delivered Charing Cross area.				
6-ton loads and upwards, site	,,	4	16	6
1 to 6 tons, site	,,	5	5	6
Ferrocrete Rapid Hardening Cement in 6-ton loads and upwards to site	,,	5	4	6
1 to 6 ton do. site	,,	5	13	6
Aquacrete Water Repellent Cement. 32s. 6d. per ton on ordinary cement prices.				
Red, Buff or Khaki Colorcrete in 6-ton lots	,,	6	18	0
Other colours according to colour.				
In 4-ton lots from 211s. 9d. to 435s. 9d. per ton.				
White Portland Cement	,,	12	17	0
Under 1 ton	per cwt.		15	4
417 Cement (Ultra Rapid Hardening) in 6-ton lots and upwards	per ton	6	9	0
Super Cement (Waterproof), 32s. 6d. per ton above Portland Cement.				
Cullamix Tyrolean Finish, £9 4s. 3d. to £10 17s. 9d. (1-ton loads and upwards).				
Lightning and Ciment Fondu Brands High Aluminous cement, 6-ton lots and up	,,	14	0	9
Stourbridge Fireclay, 6-ton loads at Railway Depot, London	,,	5	18	3

BRICKS

		£	s.	d.
Full Loads.				
First Hard Stocks	per 1,000	11	0	6
Second Hard Stocks	,,	10	4	6
Mild Stocks	,,	8	13	6
All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job.				
2½ in. Nominal Fletton Bricks to sites in W.C.				
District Commons	,,	5	13	0
Cellular do.	,,	5	13	0
Keyed do.	,,	5	15	0
Rustics	,,	6	18	0
Cellular Rustics	,,	6	18	0
Single Bullnose do.	,,	6	13	0
Sandfaced	,,	7	13	0
Best Blue Pressed Staffs (London Stations)	,,	24	6	0
Do. Bullnose (London Stations)	,,	25	0	0
Blue Wire Cuts (London Stations)	,,	21	19	0
Midhurst Lime Bricks (London Sites)	,,	9	18	0
Uxbridge Whites (London Sites)	,,	9	1	6
2½ in. Best Stourbridge Fire Bricks (London Stations)	,,	22	12	6
3 in. do. (London Stations)	,,	27	3	3
2½ in. Machine-made Sandfaced Red Facings (London Sites)	,,	13	12	0
2½ in. Machine-made Multi Red Facings (London Sites)	,,	13	17	0
2½ in. Hand-made Sandfaced Red Facings (London Sites)	,,	14	7	0
2½ in. Hand-made Sandfaced Multi-Colour Facings (London Sites)	,,	14	7	0
2½ in. Surrey Clamp Burnt Multi Stock Facings (London Sites)	,,	13	2	0
2⅝ in. Surrey Kiln Burnt Multi Stock Facings (London Sites)	per 1,000	14	0	6
Glazed Bricks (London sites), White, Ivory, Brown—				
Stretchers	,,	64	0	0
Headers	,,	63	0	0
Quoins, Bullnose and 4½ in. Flats	,,	80	0	0
Double Stretchers	,,	85	0	0
Double Headers	,,	77	10	0
One side and two ends	,,	87	0	0
Two sides and one end	,,	89	10	0
Splays and Squints	,,	83	0	0
Second quality — 10% Bests. Cream and Buff £3 extra over White. Other colours, hard glaze, £8 10s. 0d. extra over White.				

PARTITION SLABS, etc.

Delivered Central London Area.

HOLLOW CLAY PARTITION BLOCKS (Keyed)

	Minimum lorry loads.			
2 in.	140 yds.	per yd. sup.	4	3
2½ in.	140 yds.	,,	4	6
3 in.	120 yds.	,,	5	0
4 in. (6 cavity)	95 yds.	,,	6	7
Half blocks at no extra charge.				

CLINKER CONCRETE.

2 in.	100 yds.	,,	3	7
2½ in.	85 yds.	,,	4	2
3 in.	75 yds.	,,	5	0
4 in.	55 yds.	,,	6	2

CRANHAM

2 in.		,,	6	5
2½ in.		,,	7	1
3 in.		,,	8	3
4 in.		,,	10	2
4½ in. Load bearing quality		,,	11	2

FLOOR BLOCKS

3 in. Floor Blocks 12 in. by 12 in. delivered in full lorry-loads		per 1,000	31	10	0
4 in. do.		,,	34	13	0
5 in. do.		,,	39	7	0
6 in. do.		,,	46	16	0
7 in. do.		,,	54	1	0
8 in. do.		,,	61	15	0

STONEWARE DRAIN PIPES, etc.

The following are the percentages to be added to the Standard List prices delivered London Area.

	Over 2 tons	Over 100 Pieces under 2 tons	Under 100 Pieces under 2 tons
Best Quality	+67½%	+97½%	+107½%
B.S.S. Best do.	+10% +67½%	+10% +97½%	+10% +107½%
Tested Quality	+37½% +67½%	+37½% +97½%	+37½% +107½%
B.S.S. Tested do.	+47½% +67½%	+47½% +97½%	+47½% +107½%

		£	s.	d.
3 in. Land Drain Pipes (in 12 in. lengths)	per 1,000	10	8	6
4 in. do.	,,	13	14	6

STONE

		£	s.	d.
Bath Stone—				
Monks Park	per ft. cube		6	10
St. Aldheim Box Ground	,,		7	10
Delivered in railway trucks at South Lambeth B.R. Western Region				
Doulting Stone Random Blocks. Delivered London area	,,		7	7
Beer Stone. Delivered London area	,,		7	3
Portland Stone—				
Brown Whitbed in random blocks, 20 ft. average delivered in railway trucks at Nine Elms, B.R. Southern Region	,,		7	7½
Hopton-Wood Stone—				
F.O.R. Quarries, Wirksworth, Derbyshire—				
¾ in. Slabs for wall lining, sawn two sides in random sizes up to 5 ft. and not over 15 ft. super in area	per ft. sup.		6	2
1¼ in. Slabs for paving, sawn two sides as above described	,,		8	6
Yorkshire Stone—Blue Robin Hood Quality.				
Delivered to site London in 6-ton lots.				
9 in. × 3 in. Rubbed, weathered, throated and stooled cills	per ft. cube	3	1	9
12 in. × 6 in. do. do.	,,	2	4	3
12 in. × 3 in. Plain coping, twice throated	,,	1	14	0
12 in. × 3 in. Weathered and twice throated coping	,,	2	5	6
14 in. × 6 in. do. do.	,,	2	1	0
4½ in. × 9 in. Plinth, rubbed on top and face	,,	1	16	9
3 in. sawn two sides Slabs, random sizes	per ft. sup.		6	6

STONE—*continued*

		£ s. d.
Templates and Cover Stones, 3 in., 4 in. and 6 in. thick, edges coped for rendered brickwork ...	per ft. cube	1 2 6
Do. do. fair one edge for fair faced brickwork		1 6 9
Hard York—		
12 in. × 2 in. Square Steps, rubbed on top and edge	per ft. run	7 10
14 in. × 3 in. Round-nosed Steps, rubbed on top and front	per ft. cube	2 2 0
12 in. × 6 in. Plain Steps, rubbed top and front ...	„	1 16 9
2 in. Rubbed and Jointed Paving, given sizes ...	per ft. sup.	7 6
2 in. Sawn Paving, edges squared, in random sizes	per yd. sup.	2 11 9

TILES and PANTILES

Delivered London area by road in 6 tons or over per 1,000

		£ s. d.
Machine-made Pantiles and French pattern Tiles from Lincolnshire district		28 18 6
Hand-made Pantiles Berkshire district		41 18 6
Hand-made Double Roman Bridgwater district ...		56 17 6
Hand-made 10½ × 6½ tiles Berkshire district		12 17 0
Machine-made 10½ × 6½ Staffordshire district		13 5 0
Hand-made Hip and Valley tiles per doz.		1 8 6
Machine-made Hip and Valley tiles do.		1 6 3
Concrete tiles 10½ × 6½		6 18 6
do. Interlocking (49S)		18 9 6

NOTE.—Breakage in transit, purchasers' responsibility.

SLATES

First-quality Slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

		£ s. d.
24 × 12		100 16 9
22 × 12		86 6 6
22 × 11		78 0 6
20 × 12		73 3 3
20 × 10		68 10 9
18 × 10		50 17 0
18 × 9		43 15 0
16 × 10		42 18 3
16 × 8		33 13 3

NOTE.—Breakage in transit, purchasers' responsibility.

TIMBER

Softwood—				
Joinery quality	Ex. Wharf	per standard	£105 to £125	
Carcassing quality	do.	„	£90 to £100	
1 in. Tongued and Grooved Flooring	do.	„	£106	0 0
Hardwood—				
Mahogany—African S.E. ...	do.	per ft. cube	1	5 0
do. Honduras do. ...	do.	„	3	5 0
Oak European do. ...	do.	„	1	17 6
do. Japanese do. ...	do.	„	2	5 0
do. English Logs sawn	do.	„	1	5 0
Teak 8 in. average S.E.	do.	„	3	0 0
Walnut African Logs sawn	do.	„	1	1 0

DOORS (in Lots I-II)

Delivered London area.

		£ s. d.
1½ in. 4 Horizontal Panel Pattern 4 in. deal		
2 ft. 0 in. × 6 ft. 6 in.	each	1 12 0
2 ft. 3 in. × 6 ft. 6 in.	„	1 13 0
2 ft. 6 in. × 6 ft. 6 in.	„	1 14 0
2 ft. 9 in. × 6 ft. 6 in.	„	1 16 6
2 in. do. but top panel open. Pattern 4 × G in deal		
2 ft. 6 in. × 6 ft. 6 in.	„	2 9 0
2 ft. 9 in. × 6 ft. 6 in.	„	2 11 6
2 in. Panel, top panel open. Pattern 2 × G in deal		
2 ft. 6 in. × 6 ft. 6 in.	„	2 1 9
2 ft. 9 in. × 6 ft. 6 in.	„	2 3 6

SUNDRIES

Delivered London area

		£ s. d.
1 in. Wood Wool Slabs, 6 ft. 0 in. × 2 ft. 0 in. in quantities of 1 ton (89 yds to 1 ton)	per yd.	5 8
1½ in do. (67 yds. to 1 ton) ...	„	7 4
2 in. do. (52 yds. to 1 ton) ...	„	8 11½
2½ in. do. (45 yds. to 1 ton) ...	„	10 3
3 in. do. (39 yds. to 1 ton) ...	„	11 5½
Quantities under 1 ton add 1d. per ½ in. of thickness.		
⅛ in. imported insulation Board, quantities over 5,000 sq. ft.	per 100 sq. ft.	2 2 6
¼ in Hardboard do.	„	2 3 6
⅜ in. do. do.	„	3 5 0
½ in. Asbestos Flat Building Sheets	per yd. sup	3 2
Roofing Felt, 1-ply	„	1 6
do. 2-ply	„	1 9
Best Scotch Glue, in slabs	per ½ cwt.	5 0 0
do. pearl	„	5 5 0
Croid Glue	28 lb.	2 5 0
Cut Nails 3 in. (1-ton lots)	per ton	54 5 0
do. 4 in. and up (1-ton lots)	„	50 15 0
Wire Nails, 3 in. (4-cwt. lots)	per cwt.	2 16 3
do. 4 in. and up (4-cwt. lots)	„	2 12 9

METALS — STEEL JOISTS, ETC.

		£ s. d.
Basis Joists—		
6 in. × 5 in., 8 in. × 5 in., 8 in. × 6 in., 10 in. × 6 in. 12 in. × 6 in. plain cut to lengths delivered London area	per ton	37 10 0
Extra for sizes		
3 in. × 1½ in.	„	3 10 0
3 in. × 3 in., 4 in. × 3 in., 5 in. × 2½ in. ...	„	1 5 0
4 in. × 1½ in.	„	3 0 0
4½ in. × 1½ in., 24 in. × 7½ in.	„	2 0 0
5 in. × 3 in., 22 in. × 7 in.	„	1 0 0
6 in. × 3 in.	per ton	1 10 0
9 in. × 7 in.	„	5 0
10 in. × 4½ in., 12 in. × 5 in.	„	15 0
5 in. × 4½ in., 6 in. × 4½ in., 7 in. × 3½ in., 7 in. × 4 in., 8 in. × 4 in., 9 in. × 4 in., 10 in. × 5 in., 10 in. × 8 in., 12 in. × 8 in., 13 in. × 5½ in., 14 in. × 5½ in., 14 in. × 6 in., 14 in. × 8 in., 15 in. × 5 in., 15 in. × 6 in., 16 in. × 6 in., 16 in. × 8 in., 18 in. × 6 in., 18 in. × 7 in., 18 in. × 8 in., 20 in. × 6½ in., 20 in. × 7½ in.	„	10 0
Steel angles average price	„	38 15 0
Steel tees average price	„	39 15 0
Fabricated work delivered London—		
R.S. Joists cut and fitted	„	52 10 0
Compound girders	„	57 15 0
Stanchions	„	63 0 0
Compound stanchions	„	66 10 0
In Roof Work—Trusses and Purlins	„	78 10 0
Average prices not for awkward work.		
Mild Steel Ferro-Concrete bars to BSS785 ex London		
Stock ⅜ in. diam., and upwards	„	39 12 0
⅜ in. diam.	per ton extra	3 12 0
⅞ in. do.	„	2 17 0
½ in. do.	„	2 2 0
⅜ in. do.	„	1 7 0

MILD STEEL TUBES

Tubes to BSS1387 and Fittings. List prices and following discounts:

Galvanised Tube—	W.I. Fittings	Malleable Fittings
Class A — 31½%		
Class B + 5½%	Light + 20½%	Malleable List — 39½%+35%
Class C + 21½%	Heavy + 28½%	
Black—		
Class A — 23%		
Class B — 13½%	Light + 9%	Malleable List — 39½%
Class C — ½%	Heavy + 16½%	

C.I. HALF-ROUND GUTTERS

Delivered London per yd. in 6-ft. lengths

	Gutters	Nozzles	Stop Ends
3 in.	3/2	2/10	/10½
3½ in.	3/5½	3/1	/10½
4 in.	4/5½	3/5	1/2½
4½ in.	4/10½	3/9½	1/5½
5 in.	5/6	4/2½	1/7½

C.I.O.G. GUTTERS

3 in.	4/1½	3/8½	/11½
3½ in.	4/7	3/8½	1/2½
4 in.	5/-	3/9½	1/6½
4½ in.	5/6	4/5½	1/8½
5 in.	5/11½	5/1	2/-

C.I. RAIN-WATER PIPES

Per yd. in 6-ft. lengths	Pipe	Bends	Branches
2 in.	6/6	3/5	4/10½
2½ in.	6/9	3/9½	6/9
3 in.	7/7½	4/9½	7/3½
3½ in.	8/7	5/9	8/7½
4in.	9/11½	6/11	10/2

L.C.C. COATED SOIL PIPES

2 in.	7/8	5/11	7/2½
2½ in.	8/1	6/6	8/11
3 in.	9/1	7/2½	10/8
3½ in.	10/2	8/11	12/5
4 in.	11/7	10/-	14/7½

Above prices for gutters rain-water and soil pipes for under 3 cwt. lot only. Lots over 3 cwt. see List No. 3200 dated May 1, 1952, plus 10% and tonnage allowance. 4-ton lots 5 per cent. 2 ton lots 2½ per cent.

L.C.C. COATED DRAIN PIPES

In 9-fts.

	cwt.	qr.	lb.	per yd.	Bends	Branches
4 in.	1	1	17	20/5	14/3	25/-
6 in.	2	0	1	30/4	29/7	51/3

ASBESTOS RAIN-WATER PIPES AND FITTINGS

Orders under £30 less 12½ per cent. discount.
Orders over £30 less 17½ per cent. discount.

		2 in.	2½ in.	3 in.	4 in.
Pipes 6-ft. lengths	per yd.	3/9	4/-	4/10	6/5
Shoes... ...	each	2/5	2/8	3/2	4/3
Single Branches ...	„	3/9	4/6	5/4	7/6
Bends square or obtuse	„	2/8	2/11	3/9	5/4
Swan Necks 4½ in. proj.	„	2/11	3/9	4/3	5/11
do. 6 in. do.	„	3/2	3/9	4/10	6/5

ASBESTOS O.G. GUTTERS AND FITTINGS

		4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths	per yd.	3/7	3/11	4/8	5/7½
Drop ends	each	2/10	3/4	3/10	4/7
Stop Ends	„	/10	/11	1/-	1/2
Angles	„	2/11	3/5	4/1	4/10
Nozzles	„	2/10	3/4	3/10	4/7
Union Clips ...	„	1/5	1/8	2/1	2/5

ASBESTOS HALF-ROUND GUTTERS AND FITTINGS

		3 in.	4 in.	4½ in.	5 in.	6 in.
Gutters 6-ft. lengths	per yd.	2/6	2/11½	3/0½	3/7	5/-
Drop ends	each	2/1	2/5	2/8	2/11	4/3
Stop ends	„	/9	/10	/11	1/-	1/2
Angles	„	2/5	2/8	2/11	3/2	4/3
Nozzles	„	2/1	2/5	2/8	2/11	4/3
Union Clips	„	1/-	1/1	1/2	1/4	2/-

METALS—*Continued*

	Per ton basis in London £ s. d.
Iron—Staffordshire Crown Merchant Quality	39 10 0
Mild Steel Bars	37 15 0
Mild Steel Hoops	38 10 0

	Ex Merchant's Stock per ton Two-ton lots £ s. d.
Soft sheets C.R. and C.A.—	
20 gauge	45 19 6
24 gauge	47 4 6
26 gauge	48 14 6
Galvanised Corrugated sheets 6 ft. to 9 ft.—	
20 gauge	52 10 0
24 gauge	54 10 0
26 gauge	57 5 0
Galvanised Flat sheets C.R. and C.A.—	
20 gauge	53 10 0
24 gauge	55 10 0
26 gauge	58 5 0

Plumbers' Brass Work, Copper, Zinc, etc.

Delivered in London area. M.O.H.

All per doz.	½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
Screwdown bib cocks Crutch head for iron	73/6	109/3				
Toilet bib cocks for iron ...	94/6	135/6				
Screwdown stop cocks for iron	63/-	91/3	179/6	308/9	441/-	778/-
do. with two unions for lead	85/-	126/-	223/9	400/-	529/-	1178/-
Double nut boiler screws ...	15/9	22/-	40/-	41/-	56/9	80/-
Heavy Croydon ball valves ...	65/-	148/-	226/9	413/9	586/-	
Plumbers' union brass lead to iron	16/6	20/-	33/-	57/9	71/-	138/9
	1½ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
Caps and screws	28/6	34/9	50/6	78/9	100/9	131/3
Brass sleeves		26/3	26/3	47/3	63/-	64/-
		1½ × 6 lb.	1½ × 6 lb.	2 × 7 lb.	3 × 7 lb.	
Lead P. trap with brass cleaning screws		59/-	74/-	103/-	176/6	
Lead S. trap do.		71/-	88/3	127/6	225/6	

	s. d.
Solder	
Plumbers' ... ... per lb.	3 0
Tinmen's ... ... ,,	3 7
Blow pipe ... ... ,,	3 9

Copper tubes BSS 659/1944 on the basic price of 28¾d. per lb. plus gauge and manufacturing extras as follows. Minimum quantities, 3 cwt.

	Extra d.	Total per lb. d.
⅛ in. × 19 gauge ...	12¼	41¼
¼ in. × 19 ,, ...	10½	39½
1 in. × 18 ,, ...	9½	38½
1¼ in. × 18 ,, ...	8½	37½
1½ in. × 18 ,, ...	8¾	37¾
2 in. × 17 ,, ...	10¼	39¼

		£ s. d.
Rolled Copper sheets up to 48 in. wide, basic price plus gauge and manufacturing extras	per ton	307 5 0
Sheet Zinc, 10 gauge (25 SWG) 5 cwt. lots upwards	per cwt.	6 16 0
do. 12 gauge (23 SWG) do. ...	,,	6 14 0
do. 14 gauge (21 SWG) do. ...	,,	6 12 9
Brass tubes basic price, plus gauge and manufacturing extras	per lb.	1 11⅛

LEAD SHEET AND PIPES

Basis selling price in minimum one-ton delivery to one address in London or Home Counties.

		£ s. d.
Lead Sheet, English, 3½ lb. substance and upwards	per ton	130 0 0
Lead Water Pipe in coils	,,	131 5 0
Lead Soil Pipe, 10 ft. or over 2 in. to 4 in. dia. ...	,,	132 15 0
do. over 4 in. dia.	,,	134 15 0
Lead Gas or Untinned Compo pipe	,,	132 15 0
Extras over Basis for quantities under 1 ton		
5 cwt. and under 1 ton	per cwt.	2 0
3 cwt. do. 5 cwt.	,,	4 0
1 cwt. do. 3 cwt.	,,	6 0

Smaller quantities than 1 cwt. priced specially.
Supplying sheet lead and lead pipe to less than basis weights and cutting to sizes less than basis charged extra according to current trade schedule.
Allowance for Old Lead, collected £85 10s. 0d. per ton weighed at buyer's works.

PLASTER, etc.

		£ s. d.
Coarse Pink in 1-ton loads and over Delivered on Site	per ton	7 6 6
do. White do. do. ...	,,	7 14 3
Sirapite Coarse do. do. ...	,,	7 9 0
do. Fine do. do. ...	,,	7 17 0
Blue Lias Lime in 6-ton loads	,,	6 9 6
Hydrated Lime do.	,,	5 11 6
Lump Lime do.	,,	5 1 0
White Keen's or Parian Cement in 1-ton loads ...	,,	10 4 0
Pink Keen's or Parian Cement in 1-ton loads ...	,,	9 18 6
Granite Chips in 6-ton loads	,,	2 6 3
Hair	per cwt.	4 17 6
Gypsum Plaster Lath or Base Board ⅜ in. thick 600 yds. and over in one delivery. Delivered site ...	per yd.	2 3
Gypsum Plaster Wall Boards, 3 and 4 ft. wide, 6 to 12 ft., ⅜ in. thick, 600 yds. and over in one delivery Delivered site	,,	2 6

PAINT AND DISTEMPER

		£ s. d.
Delivered London area		
Ceiling Distemper	per cwt.	1 12 0
Washable Distemper	,,	5 12 0
Gloss Paint	per gal.	2 13 0
Snowcem cement paint (in 1 cwt. drums) ...	per cwt.	3 11 0

Lead Products and Oils.

		£ s. d.
Ground White Lead, 1 cwt. kegs	per cwt.	8 10 0
Genuine White Lead Paint, 20 gal. lots in 1 gal. tins	per gal.	3 0 0
Genuine Red Lead, Dry, 1 cwt. keg	per cwt.	6 12 6
Genuine Linseed Oil Putty, 1 cwt. keg	,,	2 7 0
Size XD quality, 28 lb.	per tin	9 0
Raw Linseed Oil (5 gal.) Drums extra	per gal.	12 6
Boiled Linseed Oil (5 gal.) do.	,,	13 0

Sundries.

		s. d.
Turpentine substitute (5 gal) Drums extra ...	,,	5 6½
do. do. (40 gal. drum) do. ...	,,	4 9
Solignum, Brown (5 gal. cans) Exterior	,,	6 6
Creosote (40 gal. barrels)	,,	2 0
Paste Powder (1 lb. packets)	per lb.	1 6
White Lining Paper	per piece	1 2

VARNISHES, etc.

		£ s. d.
Delivered London area.		
Oak Varnish, Outside or Inside	per gal.	1 12 6
Oak Pale Copal do.	,,	1 15 0
Hard Drying Oak for Inside	,,	1 17 6
Crystal Paper Varnish do.	,,	2 2 6
Eggshell Flat Varnish do.	,,	2 2 6
Finest Carriage Varnish	,,	2 10 0
Front Door Varnish	,,	1 17 6
Japan Gold Size	,,	1 10 0
Black Japan	,,	1 5 0
Brunswick Black	,,	1 0 0
Berlin Black	,,	1 5 0
Terebene	,,	1 5 0
Knotting (1 gal. bottles free)	,,	2 0 0
French and Brush Polish (do.)	,,	1 13 0

GLASS

Delivered London area.

	Per ft. super s. d.
18 oz. Sheet Glass, Ordinary Glazing Quality. Cut Sizes ...	5½
24 oz. ,, ,, ,, ,, ,, ,, ...	7½
26 oz. ,, ,, ,, ,, ,, ,, ...	9½
32 oz. ,, ,, ,, ,, ,, ,, ...	1 0
⅛ in. Rolled Plate...	9
7/16 in. and ¼ in. Rough Cast	1 0
⅛ in. Figured Rolled and Cathedral, Standard patterns :	
White	9
do. Standard Tints	1 4½
do. Special Tints	2 9
⅛ in. Cross Flexon, Pinstripe, Hammerstripe, Reeded, Reedlyte and Luminating	1 1
¼ in. Wired Cast	1 2
¼ in. Georgian Wired Cast	1 2½

Hollow Glass Blocks—	Each
P.B.2 5¾ × 5¾ × 3⅞ in.	2 9
P.B.3 7¾ × 7¾ × 3⅞ in.	4 2
P.B.32 7¾ × 7¾ × 3⅞ in.	4 2
Radiused Corner Blocks to match up with—	
P.B.2	5 3
P.B.3	6 9
P.B.32	6 9

¼ in. Polished Plate Glass, G.G. Quality—	Per ft. super
In plates not exceeding 2 ft. sup.	3 7
,, ,, ,, ,, 5 ft. sup.	4 5
,, ,, ,, ,, 45 ft. sup.	5 1
,, ,, ,, ,, 100 ft. sup.	5 6

¼ in. Polished Plate, extra sizes, *i.e.*, plates exceeding 100 ft. sup. or 160 in. one way or 96 in. both ways. G.G. quality—	
Not exceeding 135 ft. sup. or 250 in. one way or 135 in. both ways	8 4
Not exceeding 180 ft. sup., or ditto	11 3
Not exceeding 200 ft. sup., or ditto	16 0

Plates exceeding 200 ft. sup. prices on application.
Substances other than ¼ in. Polished Plate at Special Prices

Quantity Tariff—Sheet and Sundry Glass

The following prices apply to minimum quantities of one size and one pattern delivered by the manufacturer to one site at one time.

Description of Glass	Minimum quantity.	Per ft. super. s. d.
18 oz. sheet O.Q.	3,000	4
24 oz. ,, ,, ...	2,000	5½
26 oz. ,, ,, ...	2,000	7½
32 oz. ,, ,, ...	2,000	9½
⅛ in. Rolled Plate	1,000	7½
⅛ in. Figured Rolled and Cathedral Standard Patterns, White	1,000	7½
⅛ in. Cross Flexon, Pinstripe, Hammerstripe, Reeded, Luminating and Spotlyte	1,000	10½
7/16 in. and ¼ in. Rolled Plate or Rough Cast ...	2,000	10½
¼ in. Wired Cast, Hexagonal	2,000	1 0½
¼ in. Georgian Wired Cast	2,000	1 0½

The Builder

CURRENT RATES OF WAGES

AS FROM FEBRUARY 1, 1954. **(Every endeavour is made to ensure accuracy but we cannot be responsible for errors.)**

KEY TO SCHEDULE OF GRADE RATES.

Grade Classification.	A	A1	A2	A3
Craftsmen	3/7½	3/7	3/6½	3/6
Labourers	3/2	3/1½	3/1	3/0½

Town.	*Grade.*
Aberavon	A
Aberdare	A
Abergavenny	A
Abingdon	A2
Accrington	A
Addlestone	A
Aldeburgh	A2
Aldershot District	A2
Alfreton U.D.	A
Alnwick	A1
Altrincham	A
Amble	A1
Amersham	A1
Ammanford	A
Andover	A2
Ardingly	A2
Arundel	A2
Ascot	A2
Ashby-de-la-Zouch U.D.	A
Ashby Woulds U.D.	A
Ashford (Kent)	A2
Ashford (Middlesex)	A
Ashington	A
Ashtead	A
Ashton-under-Lyne	A
Aspatria and Brayton	A2
Atherstone R.D. (parts of)	A
Aylesbury	A2
Aylesby (Yorks)	A
Aylesham	A2
Bagshot	A2
Bakewell U.D.	A2
Banbury	A2
Barnard Castle U.D.	A
Barnoldswick U.D.	A1
Barnsley	A
Barrow-in-Furness	A
Barrow-upon-Soar R.D. (exc. Thrussington A2)	A
Barry	A
Basford R.D. (exc. Willough-by-on-the-Wolds A2)	A
Basingstoke	A1
Bath	A
Batley	A
Baxterley	A1
Beaconsfield & District	A1
Beamish	A
Bearl	A
Bearpark	A
Beccles	A2
Bedale R.D.	A
Bedford	A
Bedlington	A
Bedwas	A
Beeston & Stapleford U.D.	A
Belper U.D.	A
Belton	A
Berkhamsted	A
Berrington	A1
Berwick District	A
Beverley	A
Bexhill-on-Sea	A2
Biggleswade	A2
Billericay	A
Billing	A
Billingham U.D.	A
Bilsthorpe	A
Birchington	A2
Birkenhead	*
Birmingham C.B.	†A
Bishop Auckland	A
Bishop's Stortford	A
Bispham	A
Blackburn	A
Blackpool	A
Blackwell R.D.	A
Blaydon U.D.	A
Blidworth	A
Blyth	A
Bognor Regis	A2
Boldon U.D.	A
Bolsover U.D.	A
Bolton	A
Bourne End	A1
Bournemouth District	A
Bracknell	A2
Bradford	A
Bradford-on-Avon	A2
Braintree	A1
Breconshire, County of	‡A2
Brent Knoll	A2
Brentwood	A
Bridlington	A
Brierfield	A
Brighouse	A
Brighton	A
Bristol	A
Broadstairs	A2
Bromsgrove U.D.	A
Brough	A
Broughton (Cheshire)	A
Buckley	A
Bungay	A2
Burnham-on-Crouch	A2
Burnley	A
Burton-on-Trent C.B.	A
Bury	A
Bury St. Edmunds	A1
Buxton	A
Byfleet	A1
Calder Valley	A
Cambridge	A
Cannock U.D.	A
Canterbury	A2
Cardiff	A
Cardiganshire, County of	‡A2
Carlisle	A
Carmarthenshire, Cnty of	‡A2
Carnarvonshire, Cnty. of	‡A3
Carnforth	A
Castleford	A
Caterham	A
Chapel-en-le-Frith	A
Charmy Down	A
Chatham & District	A1
Cheadle (Staffs) R.D.	A
Chelmsford	A
Cheltenham	A
Chepstow	A1
Chertsey	A
Chester	A
Chesterfield M.B.	A
Chesterfield R.D.	A
Chester-le-Street U.D.	A
Chichester	A2
Chippenham (inc. Chippen-ham Within and Harden-huish	A2
Chorley	A
Clacton	A1
Cleethorpes	A
Clevedon	A1
Cleveleys	A
Clitheroe	A
Coalville U.D.	A
Cobham (Surrey)	A
Colchester	A
Colne	A
Colwyn Bay	A1
Congleton	A1
Consett	A
Conway	A1
Cornwall, County of	‡A2
Coventry C.B.	A
Cranbrook	A2
Cranleigh	A2
Crawley (Sussex)	A2
Crewe	A
Cromer	A1
Crowborough	A2
Cuckfield	A2
Dalton-in-Furness	A
Darlington District	A
Darwen	A
Deal	A2
Denbigh Town	A2
Derby C.B.	A
Devizes	A2
Devon, County of	‡A2
Dewsbury	A
Didcot	A2
Diss	A2
Doncaster C.B.	A
Dorking	A
Dorset, County of (except-ing Poole, Swanage and Wimborne A)	A2
Dover	A2
Dovercourt	A
Driffield U.D.	A1
Droitwich M.B.	A1
Dudley M.B.	A
Dunstable	A
Durham City	A
Eastbourne	A1
E. Glam. & Mon. Val.	A
East Grinstead District	A2
Eastwood (Notts.) U.D.	A
Ebbw Vale & District	A
Edenbridge	A2
Ely	A2
Epping	A
Exeter	A
Fakenham	A2
Falmouth	A2
Fareham	A
Faversham	A2
Felixstowe	A1
Filey U.D.	A
Fleetwood	A
Flint	A
Folkestone	A2
Frinton	A1
Frome	A1
Gainsborough U.D.	A
Gateshead	A
Gillingham (Kent)	A1
Glossop	A
Gloucester	A
Gloucestershire, Cnty. of	‡A2
Godalming	A2
Goole M.B.	A
Gosport	A
Grantham M.B.	A
Gravesend	A
Great Yarmouth	A
Grimsby C.B. & R.D.(part)	A
Grimsby R.D. (remainder)	A2
Guildford District	A2
Guilsborough	A1
Guiseley	A
Halesowen M.B.	A
Halifax	A
Halstead	A2
Haresfield	A1
Harlow	A
Harpenden	A
Harrogate	A
Hartlepool	A
Harwich	A
Haslemere	A2
Hastings	A2
Hatfield (Herts.)	A
Haywards Heath	A2
Hemel Hempstead	A
Henley-on-Thames	A2
Hereford	A2
Herefordshire, Cnty. of	‡A2
Herne Bay	A2
Hertford	A
Hexham U.D.	A
Heysham	A
High Wycombe	A1
Highworth	A2
Hinckley U.D.	A
Hitchin	A
Hoddesdon	A
Horley	A2
Horsham	A2
Horwich	A
Huddersfield	A
Hull	A
Hunstanton	A2
Huntingdon (Staffs)	A
Ilkley	A
Ingatestone	A1
Ipswich	A
Isle of Sheppey	A2
Isle of Thanet	A2
Isle of Wight	A2
Jarrow M.B.	A
Keighley	A
Kendal	A
Kenilworth U.D.	A
Kettering M.B.	A
Keynsham	A
Kidderminster M.B.	A
King's Lynn	A1
Kingskerswell	A1
Kingsteignton	A1
Kirkham	A
Knaresborough U.D.	A
Knowle	A1
Lancaster	A
Leamington M. B.	A
Leatherhead	A
Leeds	A
Leicester C.B.	A
Leighton Buzzard	A1
Letchworth	A1
Lewes	A2
Lichfield M.B.	A
Lincoln C.B.	A
Littlehampton	A2
Liverpool	*
Llandudno	A1
Llanelly	A
London	*
Long Eaton	A
Loughborough M.B.	A
Louth M.B.	A2
Lowestoft	A
Loxton	A2
Luton	A
Lyneham (Devon)	A2
Macclesfield	A
Maidenhead	A1
Maidstone	A1
Maltby	A
Maldon (Essex)	A1
Malvern U.D.	A1
Manchester	A
Manningtree	A1
Mansfield M.B.	A
March	A2
Margate	A2
Market Harborough U.D.	A
Maryport	A
Matlock U.D.	A1
Melksham	A2
Melton Constable	A2
Melton Mowbray U.D.	A1
Merthyr	A
Middlesbrough	A
Middleton	A
Middlewich	A
Milford Haven	A1
Morecambe	A
Morley	A
Mundesley	A2
Nantwich	A
Nelson	A
Newark-on-Trent R.D.	A1
Newbury	A2
Newcastle-on-Tyne	A
Newcastle-under-Lyme	A
New Forest District	A1
Newmarket	A1
Newport, Mon.	A
Newport Pagnell	A2
Newton Abbot	A1
Northallerton Dist.	A
Northampton C.B.	A
North Shields	A
Norton Radstock	A1
Norwich	A
Nottingham C.B.	A
Nuneaton M.B.	A
Oakham U.D.	A2
Oldham	A
Ongar	A
Ormskirk	A
Ossett and Horbury	A
Oxford	A
Oxted	A1
Paignton	A1
Peterborough	A
,, Soke	A1
Pickering	A3
Plymouth	A
Pontefract	A
Pontypridd District	A
Portishead	A
Portland Stoneyards	A
Portsmouth	A
Port Talbot	A
Preston	A
Pudsey	A
Pulborough	A2
Radnorshire, County of	‡A2
Ramsgate	A2
Rayleigh	A
Reading	A
Redcar B.	A
Redditch U.D.	A
Redhill and Reigate	A
Ripon	A3
Rochdale	A
Rochester	A1
Rotherham	A
Rugby M.B.	A
Saffron Walden	A2
St. Albans	A
St. Helens	A
St. Neots	A2
Salisbury City	A2
Salisbury Plain	A2
Sawbridgeworth	A
Saxmundham	A2
Scarborough	A
Scunthorpe	A
Selby	A
Sevenoaks	A1
Sheerness	A2
Sheffield	A
Shipley	A
Shoeburyness	A
Shoreham	A
Shrewsbury M.B.	A
Sittingbourne	A2
Skegness U.D.	A1
Skipton U.D.	A
Sleaford U.D.	A2
Slough	A1
Smethwick C.B.	†A
Snettisham	A2
Somerset, County of	‡A2
Southampton	A
Southend-on-Sea Dist.	A
Southport	A
South Shields C.B.	A
Spalding U.D.	A2
Stafford M.B.	A
Staines	A
Stamford M.B.	A1
Stantonwick	A
Stevenage	A
Stockport	A
Stockton R.D.	A
Stockton-on-Tees	A
Stoke-on-Trent C.B.	A
Stoke Orchard	A1
Stourbridge M.B.	A
Stourport U.D.	A
Stowmarket	A1
Stratford-on-Avon M.B.	A
Sunderland District	A
Sunningdale	A1
Sutton Coldfield M.B.	A
Swaffham	A2
Swanage	A1
Swansea	A
Swindon	A1
Swinton U.D.	A
Tamworth M.B.	A
Tenterden	A2
Tewkesbury	A1
Thames Haven	A
Thetford	A2
Thorpe Bay	A
Thurrock U.D.C. Area	A
,, North of, to Billericay	A
Tilbury	A
Todmorden	A
Tonbridge	A1
Torquay	A1
Totnes	A1
Trowbridge	A2
Tunbridge Wells	A1
Tynemouth C.B.	A
Uppingham (Salop)	A1
Uttoxeter U.D.	A2
Wakefield	A
Wallsend B.	A
Walsall C.B.	A
Walsden	A
Walton-on-Naze	A1
Ware	A
Warminster	A2
Warrington	A
Warwick M.B.	A
Wellington U.D.	A
Wells (Norfolk)	A2
Welwyn	A
Welwyn Gar. City	A
West Bromwich C.B.	A
Westbury	A2
Westcliff-on-Sea	A
Westerham	A1
Weston-super-Mare	A1
Weybridge	A
Weymouth	A1
Whitby U.D.	A1
Whitstable and District	A2
Wickford	A
Widnes	A
Wigan	A
Wigton	A2
Willington	A
Wilmslow	A
Wilts. County of	‡A2
Winchester	A1
Windermere	A1
Windsor and Eton	A1
Wisbech	A2
Witham	A1
Woking (District)	A1
Wokingham	A2
Wolverhampton C.B.	A
Woodbridge	A2
Worcester C.B.	A
Workington	A
Worksop M.B.	A
Worthing	A2
Wrexham (incl. Cefn)	A
Wroughton	A1
Wylam	A
Wymondham	A2
York	A

* For Birkenhead, Liverpool and London the rates are:—Craftsmen, 3s. 9d.; Labourers, 3s. 3½d. In the case of London the rate beyond the 12-mile radius is:—Craftsmen, 3s. 8½d. Labourers, 3s. 3d. † Plus 2d. per working day. ‡ This is the County rate and applies except where higher grades are stated.

NOTE.—Carpenters, Joiners and Plumbers in all towns and districts receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged in craft processes is 2s. 8d. per hour. Women introduced to carry out work other than craft processes, 2s. 4d. per hour.

For Building Trade Wages in Scotland see page 830

LOANS FOR HOUSE PURCHASE AND REPAIR

Mr. Macmillan Announces Agreement with Local Authorities and Building Societies

MR. HAROLD MACMILLAN, Minister of Housing and Local Government, announced in the House of Commons, on Tuesday, details of the schemes drawn up by his Department, in conjunction with the Local Authority Associations and the Building Societies' Association, to facilitate house purchase and repairs.

In reply to BRIG. TERENCE CLARKE, who asked if the Minister was yet in a position to make a statement about the means of making house ownership possible for those who had not got the necessary capital to make a large deposit but had adequate income to repay the loan, MR. MACMILLAN said "Yes." After consultation with the Associations of Local Authorities and the Building Societies' Association, he was urging county councils and local housing authorities to make full use of their powers under the Small Dwellings Acquisition Acts and sections 4 and 5 of the Housing Act, 1949. In particular, he was recommending each of these authorities to operate two complementary schemes of guarantee which had been worked out with the Building Societies' Association. Under these schemes the authority and his Department would share, as equal partners with the building society, the extra risk involved in the building society's making a bigger advance than it could make without a guarantee.

Building Society Advances

The first scheme contemplated a building society advance of 90 per cent. on any dwelling valued at up to £2,500; the second, a building society advance of 95 per cent. on any post-1918 dwelling valued at up to £2,000. Full particulars were given in a circular (summarised below) which was being sent to authorities that night.

The circular also urged all the authorities mentioned to use to the full their powers to make advances themselves for house purchase and other purposes. He hoped Members on all sides of the House would do their utmost to help them to persuade local authorities to make all these facilities freely available and so encourage this excellent form of personal saving.

Among the many supplementary questions asked of the Minister was one by MR. WADE, who inquired whether this proposal would apply solely to building societies, or would it also apply to banks and institutions accustomed to making loans to prospective buyers?

MR. MACMILLAN said that in first instance the best scheme was to get the Local Authority Associations and the Building Societies' Association together. They could then begin to work with all people who were prepared to proceed on the same lines as the typical scheme he had outlined.

MR. FERNYHOUGH asked whether the high rates of interest charged were not the difficulty.

MR. MACMILLAN said he thought that the chief difficulty was the large deposit needed. It would be an advantage if they could provide for a smaller amount by way of deposit.

Replying to Mr. Glenvil Hall, MR. MACMILLAN said that no legislation would be involved.

Ministry Circular

In Circular No. 42/54, which was sent by the Ministry of Housing and Local Government to local housing authorities on May 4, the powers given to local authorities under the Small Dwellings Acquisition Acts (1899 to 1923) and the Housing Act, 1949 (sections 4 and 5) are outlined. The Circular deals with the financing of (1) the building or purchase of private houses and flats; and (2) the repair, improvement, and conversion of houses and flats.

The Circular carries two appendices. Section 1 of Appendix I refers to advances for house purchase. In connection with the rates of interest charged on advances, it states that some local authorities charge only one-eighth per cent. above their own borrowing rate. A few lend at the rate they themselves borrow at, but require the borrower to reimburse their costs, thus increasing to initial capital sum he has to find.

Section 2 of Appendix I refers to advances for repairs, improvements and conversions and states:—

In the main the considerations governing advances for improvements or conversions are identical with those governing advances for acquisition or construction. The special factors seem to be (i) advances should not exceed 90 per cent. of the approved cost of works, with a maximum of 90 per cent. of the market value of the property after the works have been carried out; (ii) advances should not be made in respect of a property already mortgaged otherwise than to the lending authority.

(iii) advances may properly be made by instalments as the works proceed, provided that the total of the instalments paid before the completion of the works does not exceed 80 per cent. of the value of the work already done; and (iv) in cases where an improvement grant under section 20 of the Act of 1949 is to be paid, the advance must be limited to that part of the cost which will not be met by the grant.

Appendix II of the Circular deals with guarantees of excess advances made by building societies for house purchase. It states:—

Very little use has so far been made of the provisions of section 5(2) of the Housing Act, 1949. They could help many people of small means to buy their own houses, for one of the biggest obstacles such people have to overcome is the finding of the initial capital sum. Accordingly, discussions have taken place between representatives of the Ministry of Housing and Local Government, the Treasury, the Local Authority Associations and the Building Societies' Association.

The advantages of the tripartite scheme of guarantees under section 5(2) are:—(i) it would help to relieve the pressure on the local authority's available housing accommodation by encouraging people, especially those whose means are not substantial, to make their own arrangements for accommodation;

(ii) the amount of the risk accepted by the local authority in giving a guarantee is limited to one-third of the amount of risk involved in making a larger advance than is normally made by a building society and much less than the risk involved if the local authority themselves made the whole advance; (iii) the period for which the local authority carry the diminishing risk is much shorter under a guarantee than it is if they make the advance themselves;

(iv) the standard rate contribution for every house provided by a local authority is at least £8 18s. per annum for 60 years, which has a capitalised value of £201 at 4 per cent. interest. Under the proposals outlined in this memorandum, if a local authority incurred any loss at all it could not exceed:—in the case of a house purchased with a 90 per cent. advance, £166 13s. 4d. (exclusive of any outstanding interest), and the risk would disappear in 12 years; and in the case of a house purchased with a 95 per cent. advance, £188 17s. 9d. (exclusive of any outstanding interest), and the risk would disappear in 16 years;

(v) it is in the local authority's own interest to limit as much as possible its total capital indebtedness; (vi) house purchase schemes encourage individual savings and it is important in the national interest to increase personal savings as much as possible.

As a result of the discussions already mentioned two complementary schemes of guarantee under section 5(2) have been formulated. Particulars of these two schemes are given below. The "normal advance by building society" given in the following table has been determined by the fact that the normal advance a building society is willing to make varies with the circumstances of the borrower, and the deposit he himself puts down. In both the schemes now put forward the society would advance a very high percentage of the value of the house and the borrower himself would put up an unusually low stake. The two schemes are as follows:—

	Scheme A (applicable to all dwellings)	*Scheme B (confined to dwellings built after 1918)*
Purchase price or valuation, whichever is the lower, *must not exceed*	£2,500	£2,000
Maximum advance by building society	90%	95%
Normal advance by building society	70%	66⅔%
Release figure (i.e., guaranteed by local authority at an end when principal outstanding falls to the specified percentage of purchase price or valuation, whichever is the lower)	60%	50%
Maximum period of repayment	25 years	25 years
Rate of interest to be charged	4½%	4½%

Both schemes set out above would apply to new and old property, both freehold and leasehold (subject to the lease continuing for at least 20 years after the end of the repayment term), and would be limited to first mortgages.

National Federation Comment

MR. GEORGE GROSVENOR, President of the National Federation of Building Trades' Employers, commenting upon Mr. Macmillan's statement, said: "However easy or difficult it may have been hitherto for a person to build his own house, and we must not forget the progressive easing of housing and building controls in recent years, it is going to be more easy under this scheme. It can be scarcely expected that everyone will get a 95 per cent. loan but it appears that everyone who wants to build a house will get better terms than in the past. I can assure the Minister and the public that the building industry is standing by, ready to play its part in this move to bring the advantages of home ownership to the ordinary family man, and I earnestly hope that local authorities and building societies will do all in their power to adopt the scheme and make it a big success."

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TRADE NEWS

Change of Address

The London office of Stephenson Developments (Hudd.), Ltd., is now at Broughton House, Sackville-street, Piccadilly, W1; telephone number: Regent 5860.

London Sales Office

Jaconello, Ltd., and the British Doloment Co., Ltd., have reopened a sales office at 18, Howick-place, London, SW1 (Tel.: Victoria 6176). Works and office continue to remain at Central-avenue, West Molesey, Surrey.

Cooker Control Units

To harmonise with the changing trends in kitchen decoration, the cooker control units produced by M K Electric, Ltd., Wakefield-street, Edmonton, N18, are to be made available with an alternative finish of white enamel. The first deliveries will take place early in June.

Factory Maintenance

A bi-monthly "Treto! Maintenance News" is now available post free from Tretol, Ltd., 12, North End-road, London, NW11. The publication, which deals with problems of factory maintenance, is primarily intended for circulation amongst works and maintenance engineers. Subjects discussed in the Spring issue include corrosion prevention, decoration of factory walls, dustproofing of floors and painting asbestos-cement.

Mobile Cranes

The manufacture of their mobile cranes and the variety of purposes for which they have been employed are depicted in a sound colour film which has been produced by R. H. Neal and Co., Ltd., Plant House, Ealing, W5. The use of these cranes on various large building projects is fully demonstrated as is their application in other spheres of industry.

Booklet

The story of their growth and a summary of their present-day activities have been published by Hall and Co., Ltd., Victoria Wharf, Croydon, in the form of a booklet. The notes are intended to give newcomers to the company an idea of its organisation, but the manner in which they are presented makes the booklet interesting to all those connected with the industry.

Distributors' Conference

For one week, from May 29 to June 6 next, nearly a hundred overseas distributors and sales agents will attend a conference at Harrogate, organised by Steels Engineering Products, Ltd., of Sunderland. The company, who manufacture Coles mobile cranes, electric trucks and hoists, have booked the Prince of Wales Hotel, where delegates will be accommodated and the business sessions held. The programme for the week includes films and demonstrations of all Coles equipment, lectures on materials handling, crane selling technique, and future trends in design. The aim of the conference is to bring closer together those responsible for designing and building mechanical handling plant and those whose job it is to sell these British products abroad.

Prefabricated Bungalow

A medium-sized bungalow called the "Cedar Home" is being produced as one of a new range by Ernest Holmes, Ltd. The buildings in this range cover most accommodation requirements from small holiday chalets to large modern bungalows, and this particular model has an overall size of 28 ft. by 21 ft. The exterior shiplap weatherboards are of cedarwood, which requires no painting or other treatment. The floors are of Abura or Keruing, one inch thick, and the bungalow is fitted with "Allday" sashless windows with night vents. The roof is of $\frac{1}{8}$-in. close boards surfaced with red or green Ruberoid mineral surface slates. Concealed asbestos cement rainwater goods are fitted, and a complete prefabricated electrical installation and plumbing system are provided. The floor frames are self-supporting, needing only brick piers as foundations, and it is understood that the building can be erected in approximately 24 hours. A 20-year mortgage is made available for the "Cedar Home" by the company, who also undertake the design and manufacture of timber buildings for hospitals and institutions.

PERSONAL COLUMN

Changes on the board of directors are announced by the Rom River Co., Ltd. MESSRS. S. R. COTTON, G. R. H. S. NEWMAN and J. F. NEWMAN have been appointed to the board, while MR. J. BRUCE has resigned his directorship. The company are now installed at their new offices, St. Richards House, 90, Eversholt-street, London, NW1.

W. H. Heywood and Co., Ltd., patent glazing and roofing engineers, Bayhall Works, Huddersfield, announce the appointment of MR G. P. COLE, Cornwall House, The Promenade, Clifton, Bristol (Tel.: 38324), as area representative for Gloucestershire, Somerset and South Wales. Heywoods also announce that MR. H. PENNINGTON is now their representative for SW Lancashire, SW Cheshire, North Staffordshire and North Wales. His new office is at Exchange Buildings, Sefton House, Liverpool (Tel.: Liverpool Central 4214).

The appointment to the board of MR. JOHN CREEK as sales director has been announced by Mr. A. Hudson Davies, managing director of Fibreglass, Ltd.

MR. K. R. TAYLOR, ACA, has been appointed a director of Santon, Ltd., Somerton Works, Newport, Mon.

New leaflets on

SLIDING DOOR GEAR

HAVE you copies in your reference file of the latest leaflets showing the range and applications of KING Sliding Door Gear? From the lightest domestic installations to heavyweight power operated doors, there's a KING door set for every need. Get the details—write for your copy.

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NEWS IN BRIEF

Visit to Italy

A party organised by the Eastern Federation of Building Trades Employers, 96, Tenison-road, Cambridge, is to leave on May 10 for an official visit to Italy. The business aspect of the visit will be concentrated in Milan, but a tour will be made of Gardone and Venice. The places visited will include Verona, Vicenza and Padua, and the party is scheduled to return home on May 23.

The Late Mr. A. G. Carter

The death of Mr. Albert G. Carter, chairman of Dearsley and Carter, Ltd., occurred on April 28.

The Late Mr. F. H. Pollard

Messrs. Y. J. Lovell and Son, Ltd., announce with deep regret the death of a former member of their board, Mr. F. H. Pollard, who was formerly in charge of their Marlow branch. He will be greatly missed by a wide circle of friends in the industry.

"The American Colonial Home"

An exhibition of early American furniture, china, glass and silver is now on display at the Geffrye Museum, Kingsland-road, Shoreditch, until Wednesday, June 30. It is open on week-days (except Mondays) from 10 a.m. to 5 p.m., and on Sundays from 2 p.m. to 5 p.m. There is no charge for admission.

Helicopter Facilities

Bristol Co-operative Society are planning new premises, to cost about £1m., in Old King-street, Bristol. It is hoped that the society's own helicopters will eventually land and take off from the main administrative building. There will be a car park in the basement.

Newfoundland Restoration

Mr. Edwin Tebb, a director of the Rutland Masonry Works, Ltd., is to sail to Newfoundland to supervise restoration work on St. John's Cathedral in the capital of the island. He will act on behalf of Sir Giles Gilbert Scott, FRIBA. Mr. Tebb was recently associated with the bomb-damage repairs at Buckingham Palace.

Shopfitting Journal

The first issue has appeared of a new monthly publication entitled "Shopfitting and Allied Trades Journal." It is intended that the journal shall feature some of the most outstanding shopfitting schemes that have been carried out. Illustrated in the current issue are a men's wear shop, a new style shoe shop and a showroom. Another article deals with self-service in the USA. The journal is priced at one shilling and copies may be obtained from the editor at 259, Birkbeck-road, Beckenham, Kent.

LCC School Building

The cost at tender stage of the LCC programmes of educational building for 1952-53 and 1953-54 is £9,227,319, made up as follows: primary and secondary schools, £8,499,080; special schools, £51,883; further education, £676,356. These projects will provide 7,200 places in 19 new primary schools, 22,475 places in 17 new secondary schools and 80 places in one new special school. In addition, 1,040 primary school places, 2,938 secondary school places and 20 special school places will be provided by the repair of war damage or by extensions to six existing primary, eight existing secondary and one existing special school.

OVERSEAS BUILDING

[From Our Own Correspondents]

Argentina.—The Argentine Directorate of State Industries has given authority for the construction of a large new cement factory called El Gigante, in San Luis, with an annual output of 150,000 tons. In the meantime, 200,000 tons of cement is being imported by the Trade Promotion Institute to meet the present shortages.

A group of 20 paper manufacturers have announced recently that they will erect a paper mill at a cost of 200m. pesos with an annual output of 70,000 tons.

Greece.—A $13m. contract for the construction of a power station on the River Megdova (Central Greece) has been awarded by the Greek Government to the US firm of Messrs. Thomson Starret. This firm will finance and execute the whole project exclusively with dollar funds, repayable in 20 years at 3½ per cent. interest. The project, which will take three years to complete, covers the construction of a 150-ft.-high dam, the installation of an 84,000-kw hydro-electric plant, the construction of a 25-mile-long transmission cable and the execution of irrigation projects covering about 30,000 acres.

Nyasaland.—A new 216-bed hospital is to be built in Blantyre, Nyasaland. It has been estimated that the total cost of building and equipping the hospital and providing staff accommodation on and off the hospital site will be about £750,000. The cost is to be borne by the Federal Government. There will be two maternity pavilions, two operating theatres, an out-patients' and casualty department and a central laboratory. Hostels are also to be built for students and assistants.

Peru.—A modern oil refinery to supplement existing installations is being built in Talara in northern Peru by the International Petroleum Company at a cost of $4m. and with a capacity of 45,000 barrels daily. The refinery, which was to have been built at Callao, is now to be built at Pisco, in southern Peru. It is estimated that the cost of this refinery will be at least $8m. It is interesting to note that a number of German financiers are behind this project. The president of the company will be an Argentinian.

The Government salt monopoly, Estanco de la Sal, 539, Caqueta, Lima, is installing a modern refining plant which is expected to begin operations early next year. The contract for the construction has been awarded to Salt Chemicals, Inc., of Tarrytown, New York, and the cost is reported to be in the region of $½m. The Compania de Cemento Portland del Norte hopes shortly to obtain a loan of $3½m. from the International Bank to enable them to build a new cement factory at Pacasmayo, a coastal town situated about 650 kms. north of Lima.

A limited liability company has been established by Senor Angel Grayson Fossa and Senor Domingo Gallardo, of Yungay 457, Magdalena Nueva, with the object of building a small factory in Trujillo, north Peru, for the manufacture of luminous paint. Plans for the construction of the underground railway in Lima are shortly to be finalised. A representative of the French company Societe Generale de Traction et d'Exploitations has been in Lima to prepare the way for the organisation of a semi-official Peruvian body with the character of a public utility company to administer the "Metro de Lima." This French company and a group of French banks are supplying the necessary capital.

It has been announced in the Press that Sears Roebuck and Co., of the USA, will shortly be building a large departmental store in Lima. Work is also to commence shortly on the construction of the new buildings for the Catholic University.

Southern Rhodesia.—A cathedral is to be built in Salisbury by the Greek community. Associated Portland Cement Manufacturers, of London, are to build a factory in Salisbury to manufacture cement. Arrangements have been made with the Rhodesian Government and work will commence shortly. Production is scheduled to begin in 1956 at the rate of 110,000 tons a year.

Plans for the University of Rhodesia are nearly complete. It has been decided to build on the Mount Pleasant site in Salisbury. Land has been granted adjacent to the site by the City of Salisbury and the total area now is 458 acres. It has been estimated that nearly £2m. will be required for buildings and fittings. Her Majesty's Government is to contribute £1½m. from Colonial Development and Welfare funds.

Utrecht Trade Fair

The 62nd Utrecht Trade Fair was held from March 30 to April 8 last. The main feature of the Technical Fair was the section for building materials and building machinery. Eighty per cent. of the exhibitors in this section appeared to have booked good results. One of them reported to have sold 13 draglines, while another had received orders for 32 concrete mixers. Foreign visitors considered the building section of the Fair one of the most complete shows in this field in Europe. This section is of international importance, as is evidenced by the orders received from foreign buyers, among others from Sweden, England, Malacca and Syria.

Officials to Visit Britain

Three leading officials of the New Zealand Education Department will arrive in Britain in mid-May to study new methods in the design and building of schools. They are Mr. C. G. S. Ellis, assistant director of education; Mr. G. V. Wild, chief inspector of post-primary schools; and Mr. R. A. Widdicombe, architect to the Education Department. They can be contacted through the New Zealand Government Office, 415, Strand, London, WC2.

British Trade Fair, Baghdad

A report on the recent severe floods in Iraq and their effect on the British Trade Fair which is to be held in Baghdad from October 25 to November 8 next, was given by Mr. D. A. Lamb, organiser of the Fair, on April 22. He had just returned from Baghdad over the Easter holidays and he paid a tribute to the efforts of British contractors in flood relief work there. Seepage of water had affected one part of the exhibition site, but he was certain they would overcome this in a month. The chief problem, he thought, would be shortages of bricks and cement, but to alleviate this the Iraqi government had temporarily lifted the ban on the importation of cement. In giving details of the progress that had been made on the site and matters concerning the Fair generally, Mr. Lamb announced that a completely equipped prefabricated aluminium school was to be erected at the Fair by the Bristol Aeroplane Co. (Weston), Ltd., of Weston-super-Mare.

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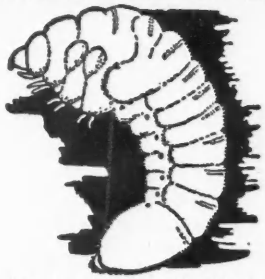

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OFFICIAL NOTIFICATION

Imports from Western Europe

THE BOARD OF TRADE have announced that arrangements for import quotas from Western Europe and certain other countries for the second half of 1954 have now been made, and are substantially unchanged.

Opportunity has been taken to make a few minor additions, beginning May 9, to the list of goods which may be imported from Western Europe and certain other countries without quantitative restriction. Among the additions are concrete block making machines and concrete pipe spinning machines.

Details of the goods and the countries involved are given in Notices to Importers Nos. 644 and 643, issued by the Import Licensing Branch of the Board on May 5.

Firm's Dinner

An interesting function was held at the Royal Hotel, Cardiff, on April 14 when the Cardiff firm of builders, E. Turner and Sons, Ltd., held a dinner and social evening. The dinner was given by the directors to all those employees of more than 10 years' service. There were 74 members of the firm present who qualified by this length of service, and between them they had an aggregate of 1,758 years service, an average of 24 years each. The chairman of directors, Mr. T. H. Huxley Turner, made a presentation to six members with over 50 years' service. The senior of these was Mr. Oliver Butcher, with 62 years' service, and between them the six had 334 years' service to their credit. The toast of the firm was proposed by Sir Percy Thomas OBE, FRIBA, who reminded his audience that the firm had erected the three buildings for which he had been awarded the RIBA's Bronze Medal.

The SCOTTISH BUILDER

Edinburgh AA

SPEAKING at the annual meeting of Edinburgh Architectural Association, MR. T. WALLER MARWICK, FRIAS, FRIBA, in his presidential address, suggested that there were rather too many amateur architects, who frequently appeared towards the end of a project on which the professional practitioner had been engaged "just to add that final touch" which, inevitably, detracted from the entire conception, he said.

They did as architects, however, doubly welcome the increased public interest in architecture, and they themselves must guard against the "awful sign of being too possessive" of the designs they brought into being.

Some quarters maintained, and, indeed, sought to foster, the idea that the days of the private practising architect were numbered. This erroneous assumption was, he thought, entirely regrettable. Again there were certain factions whose endeavour it was (or so it would appear) to introduce revolutionary and unorthodox procedure into the building industry, particularly in respect of tendering methods. These proposals seemed to him to run contrary to the recommendations, if not the spirit, of not only the Simon Report, but also the more recently published report on tendering procedure compiled jointly by the Buildings Professions and representatives of the industry.

To his mind, innovations whether they were concerned with architectural education or general practice should not run counter to the principles which had become established through many years of laborious experience.

A Gypsum-Built Bungalow

SLABS OF BITUMENISED GYPSUM form both the exterior and interior walls of a bungalow just completed in Anniesland-road, Glasgow, by Messrs. John Lawrence (Glasgow), Ltd.

The gypsum slabs, known as "Bellrock" blocks, are brought to the site in slabs 8 ft. by 2 ft. by 5 ins. and can be cut on the site with an ordinary handsaw and put into position immediately. The blocks are of two types, those for the outside having a honeycombed exterior which allows a roughcast finish to be given, while the interior ones have a plaster coating.

Unskilled workmen are able to build the walls with a small number of skilled tradesmen to seal the blocks with liquid gypsum and do the normal building work on the rest of the house.

Apart from the gypsum walls, everything in the bungalow is of standard materials, used in traditional designs.

The bungalow, which totals some 1,335 square feet, has three bedrooms, two public rooms, kitchenette, and a bathroom.

Loch Shin Power Scheme

THE NORTH OF SCOTLAND HYDRO-ELECTRIC BOARD have placed contracts valued at approximately £5m. for the Loch Shin hydro-electric scheme. George Wimpey and Co., Ltd., civil engineering contractors, Edinburgh, are to build the Shin generating station and tunnel and Lairg dam. The tunnel will be five miles in length. Lairg dam will be 38 ft. high and 1,370 ft. long.

R. J. McLeod (Contractors), Ltd., Glasgow, will construct the Cassley generating station on the south shore of Loch Shin, the aqueducts which will collect water from the head waters of the River Cassley and a tunnel two and a half miles long which will lead it to the power station.

NEW BUILDINGS

Aberdeen.—Corporation has approved in principle a scheme for a new community centre and library accommodation to be erected at Northfields, for which plans are to be prepared by Alexander B. Gardner (F.), Municipal-bldgs., Broad-st., The Castlegate, Aberdeen.

Auchincairn.—Plans to be prepared for 98 houses to be erected at the South Springfield housing site for which the architect is Samuel MacColl (A), County-bldgs., Beckford-st., Hamilton West.

Dumbartonshire.—Plans to be prepared for 40 flats to be erected at Unit No. 1 (Area K1) for which the architect is Archibald G. Jury (F.), Housing Offices, The Trongate, Glasgow.

Dundee.—Corporation has had plans prepared for new bathing shelter, est. to cost £7,500, to be erected at Broughty Ferry. The Council A is J. MacLellan Brown (F.), Municipal-bldgs., City-sq., Dundee.

Edinburgh.—Plans prepared and approved for new ice cream factory to be erected for the Eldorado Ice Cream Co., Ltd., Edinburgh.

Edinburgh.—Dean of Guild Court have granted warrant to the Corporation and two private building firms to erect a total of 367 houses in the city. The biggest scheme will be undertaken by the Corporation who plan to build 269 three- and four-apartment houses and eight shops at Clermiston. Mactaggart & Mickel were granted warrant to erect 12 houses at Broomhall-pl. at a cost of £27,240; 26 houses at Silverknowles-grove, Eastway, and Gardens, at a cost of £60,540; and 12 houses at Silverknowes Parkway, costing £19,680. James Miller & Ptnrs., Ltd., were granted permission to erect 17 houses at Allan Parkcres., Loan, and Drive, at a cost of £34,000. They were also granted warrant to build 27 houses in nine blocks, with lock-up garages at Priestfield-rd. and Priestfield-cres. The project will cost £51,400.

Fifeshire.—CC has had plans prepared and approved for new high school for Kirkcaldy, which is to be erected, at an est. cost of £400,000, at the Middle-dr., Dunnikier Park. The architect is Robert S. Lawrie (A), County-bldgs., St. Catherines-st., Cupar, Fife.

Glasgow.—Plans prepared for new garage to be erected at Hawick-st., for which the architect is Archibald S. MacPherson, 24, Glen-cres., Glasgow.

Glasgow.—Plans prepared and approved for the new Langlands Congregational Church and Halls to be erected at Ardlaw and MacGregor-sts., Govan, for which the architects are Launcelot H. Ross & Lindsay (F&A), 79, West Regent-st., Glasgow.

Glasgow.—Plans prepared for Ruberoid Co., Ltd., Commonwealth House, 1-19, Oxford-st., London, WC1, have been approved for alterations at 616-626, Argyll-st. for which the architects are James Monro & Son, F&ARIBA, West George-st., Glasgow.

Glasgow.—Plans prepared and approved for alterations at 154-164, Sauchiehall-st. for Montague Burton, Ltd., these being by their own Architectural Department, Leeds, N9.

Glasgow.—Plans prepared and approved for additions and alterations for the St. George's Co-operative Society, Ltd., at St. George's-rd. and Gladstone-st., St. George's Cross, for which the architect is Kenneth G. Masson (F.), 119, Paisley-rd., Tradeston, Glasgow.

Glasgow.—Plans prepared for alterations and additions and new lift for A. R. Stenhouse & Ptnrs., Ltd., to be constructed at St. Vincent-st., for which the architects are George Boswell, Mitchell, & Johnstone (F&A), 256, West George-st., Glasgow.

Glasgow.—Plans prepared and approved for H. and D. Cohen, Ltd., for extensions and alterations at Customholm-rd. for which the architects are James M. Monro & Son (F&A), West George-st., Glasgow.

Glasgow.—Plans to be prepared for new warehouse buildings to be erected at 5 to 41, Charlotte-st., Gallowgate, for which the architects are Wylie, Shanks & Wylie (F&A), 120, Blythswood-st., Glasgow.

Glasgow.—Plans prepared for new building for Brown & Adam, Ltd., to be erected at Silverford-rd. for which the architect is Andrew A. Dickson, 7, Bengal-st., Glasgow.

Glasgow.—Plans prepared for new hall to be erected at Rotherwood-ave. for which the architect is Edward D. MacKay, 284, Knightswood-rd., Anniesland, Glasgow.

Glasgow.—Plans prepared for new building for Andrew MacNair & Co., Ltd., to be erected at Summerfield-st., Dalmarnock-rd., Bridgeton, for which the architects are William Baillie & Son (F&A), Accountancy Hall-bldgs., West Regent-st., Glasgow.

Gourock.—Plans in the hands of their own architects for alterations and additions to be constructed at the Cardwell Bay laundry, Renfrewshire, of The Gourock Steam Laundry Co., Ltd.

Hamilton.—Sketch plans for the new Laigstonhall Catholic prim. sch. are being revised for presentation to the Scottish Education Authority, by Lanarkshire's Education A, William Watt (F.), County Offices, Albert-st., Motherwell-Wishaw.

Hillington.—Plans prepared for extensions to factory at the Scottish Industrial Estate, Colquhoun-ave., for which the architect is Frank Hudson, 154, Cairnhill-rd., Airdrie.

Holytown.—Plans prepared for 68 houses for Lanarkshire CC to be erected at the Sunnyside housing site, for which the architect is Samuel MacColl (A), County-bldgs., Beckford-st., Hamilton West.

Lanarkshire.—Plans prepared and approved for an extension to the Bellshill Hospital, est. to cost £600,000, for the West District Hosp. Brd.

Mid Lothian.—Plans prepared by their own architects for alterations and additions, est. to cost £9,000, for a new British Linen Bank at Dalkeith, have been approved.

Pollockshaws.—Plans prepared for alterations for The Compressor Services, Ltd., at Shawbridge-st., Lanarkshire, for which the architects are Whyte & Nicol (F.), 31, North Frederick-st., George-sq., Glasgow.

Renfrewshire.—Under their authorised programme, The Scottish Special Housing Association, Ltd., Edinburgh, is to build 352 houses at the Brachalton Farm site near Greenock, for which the architect is J. Austen Bent (A), 15, Palmerston-pl., Edinburgh.

Renfrewshire.—Plans have been prepared and approved for the erection of 102 houses on the first section of Larkfield Site 3. The Corporation Architect is Robert L. Rankine, AMTPI, AMInstCE, Municipal-bldgs., Hamilton-st., Cathcart-sq., Greenock.

Stirlingshire.—Plans prepared and approved for new nurses' home to be erected at the Royal Infirmary at an est. cost of over £57,000.

Stirlingshire.—Plans prepared and approved for new administrative block of buildings to be erected at Elma-rd., by Concrete, Ltd., Falkirk.

SCOTTISH BUILDING TRADE WAGES

FOLLOWING are rates of wages authorised by the Scottish National Joint Council as from February 1, 1954. They apply to the whole of Scotland, including the islands of Orkney, Shetland, etc.

Grade A: Craftsmen, 3s. 7½d.; Labourers, 3s. 2d.

For apprentices, the rates are:

Year.	Percentage of Craftsman's rate.	For week of 44 hours. s. d.
1st.	25	39 10½
2nd	33½	53 2
3rd	50	79 9
4th	66⅔	106 4
5th	75	119 7½

For female labour, the rates are:

	s. d.
Operatives on craft operations (at end of probationary period)	3 2
Operatives on labouring operations (at end of probationary period)	2 10½

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CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

MAY 12.

***†Northampton CBC.**—21 houses at Eastfield. Boro' A. Dep. £2 2s. Tenders by June 12.

MAY 13.

***†Southampton CBC.**—Pair of houses at Twyford. Boro' A. Dep. £1. Tenders by June 15.

MAY 14.

***†Bristol CC.**—(a) 48 houses at Highbridge; (b) 19 houses at Falcondale-rd. City A. Dep. £2 2s. each contract.

***†Bucks CC.**—Alterations and additions to County Library, Pebble-la., Aylesbury. County A, Aylesbury. Tenders by June 9.

***†Durham CC.**—Conversion of central kitchen to dining-room, Cornsay Colliery county school, No. 48, County A, Durham.

***†Ipswich CBC.**—32 flats on Chantry estate 2A. BE&S. Dep. £3 3s. Tenders by June 17.

***†Salford City C.**—Ordsall secondary modern school. Halliday & Agate, architects, 14, John Dalton-st., Manchester, 2. Dep. £5 5s.

MAY 17.

***†Beckenham BC.**—172 dwellings, etc., adjoining Crystal Palace Park-rd. and Sydenham-ave. R. Webster Storr, TC. Dep. £2. Tenders by June 14.

***Southend-on-Sea CB.**—Reinstatement of roofs of girls' block and practical block, Westborough secondary schools. A. Glen, TC. Dep. £1.

MAY 18.

***†Folkestone BC.**—Seven dwellings, Bridge-st. site, and four houses Tram-rd. BE. Dep. £3 3s. each.

MAY 19.

***†Norfolk EC.**—Woodwork shop, laboratory and two classrooms at King's Lynn, King Edward 7 Grammar School.

***†Wilts CC.**—Three-classroom primary school at Southbroom, Devizes. County A, Trowbridge. Dep. £2 2s.

MAY 20.

***Blackburn CB.**—Repairs and alterations, Girls' High School, Preston New-rd. BE.

***†Durham Cty. Police Authy.**—Nine police houses on various sites. G. Clayton, FRIBA, Court-la., Durham.

Newcastle upon Tyne TC.—68 flats and maisonettes on the Elswick-st. site. City A, 18, Cloth Market, Newcastle upon Tyne, 1.

MAY 21.

***†Newcastle Reg. Hosp. Board.**—Adaptations at Walker Gate Hospital. R. Dobbin, Secretary, "Dunira," Osborne-rd., Newcastle upon Tyne, 2.

MAY 22.

***†Leominster BC.**—Six traditional type houses, Westfield-walk site. W. B. Bond, FRICS, 49/50, Calthorpe-rd., Edgbaston, Birmingham, 15. Dep. £2 2s.

MAY 24.

***Mablethorpe and Sutton Cheam UDC.**—Toilets and kiosk on South Promenade, Mablethorpe. R. Vincent Lewis, Clerk of C. Dep. £2 2s.

Preston CBC.—Structural steelwork for Ashton I county secondary school. BE&S.

MAY 25.

Clevedon UDC.—20 houses. E&S. Dep. £2 2s.

***Harrow UDC.**—Hut for civil defence purposes, Sancroft-rd., Harrow Weald. J. H. Melville Richards, E&S. Dep. £2.

MAY 26.

***Barrow-in-Furness CBC.**—Alterations at Technical College, Abbey-rd. BE&S. Dep. £2 2s.

MAY 27.

***Glasgow Corpn.**—133 flats at unit No. 1, area S1, Castlemilk. A and Planning Dept., 20, Trongate, Glasgow, C.1.

MAY 29.

***Altrincham BC.**—34 flats on Broomwood estate. BS. Dep. £5 5s.

MAY 31.

***Congleton BC.**—Contract No. 1, 58 dwellings on Buglawton housing estate. BE&S. Dep. £2 2s.

JUNE 1.

Brighton CBC.—Buildings at Patcham-court Farm. WE's Office. Waterworks E. Dep. £2 2s.

†Southgate BC.—Selected list of contractors. BE&S.

JUNE 2.

***Ilford BC.**—Civil Defence centre at Barkingside. BE. Dep. £2 2s.

JUNE 3.

***Guildford BC.**—31 pairs houses and 8 flats, Park Barn. BE&S. Dep. £2 2s.

JUNE 9.

***Brighton CBC.**—Factory at Hollingbury light industrial area. D. J. Howe, MICE, 26-30, King's-rd. Dep. £3 3s.

JUNE 15.

***Bournemouth CBC.** — 24 houses at West Howe estate. Boro' A. Dep. £2 2s.

NO DATE.

***Croydon CBC.**—Detached house, Waddon-way. BE. Dep. £3 3s.

Pittenweem TC.—Trades for the erection of 12 houses at East Braes site, 5th development. L. A. Rolland, architect and quantity surveyor, The Albion House, Shonehead, Leven.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

MAY 12.

***†Hornsey BC.**—Eight shower/dressing cubicles at Hornsey-rd. Baths. Hsg. Mgr.

MAY 17.

***†Beds EC.**—Installation of hot water heating system, Ampthill-rd. school, Bedford. County A, Bedford.

***Yiewsley and West Drayton UDC.**—330 tiled fireplaces complete with back boilers. E.

MAY 24.

***Esher UDC.**—Internal electrical installations in 40 houses. E&S. Dep. £1 1s.

***Southport CBC.**—Brickwork repairs at Stanley Secondary Modern School. Boro' A. Dep. £1 1s.

MAY 26.

Finchley BC.—Annual decorations to schools and other buildings in four contracts. BE&S, 294/296, Regents Park-rd., Finchley, N3. Dep. £2 each contract.

***Southport CBC.**—Electrical installations in 96 houses on Canning-rd., Lytham-rd. and Shaws-rd. housing estates. Boro' A. Dep. £1 1s.

MAY 28.

***Sunderland Local Ed. Authy.**—Supply of certain components for Broadway primary junior school. Boro' A. Dep. £1 1s.

***Tottenham BC.**—Demolition of Downhills Water Tower. BE. Dep. £2 2s.

MAY 31.

***Richmond (Surrey) BC.**—External painting and repairs to 60 houses in groups of 42 and 18. BE&S. Dep. £2 2s.

ROADS, SEWERAGE AND WATER WORKS

MAY 17.

***West Riding of Yorks CC.**—Resurfacing work at Ilkley College of Housecraft. County A, Wakefield. Dep. £2 2s.

MAY 24.

Bedford BC.—Heating, planing and resurfacing about 21,000 sq. yds. carriageway. BE&S. Dep. £1 1s.

Chatham BC.—Widening and resurfacing of Wayfield-rd. (now known as Street End-rd.). Deputy BE&S, Town Hall, Chatham. Dep. £3 3s.

Sale BC.—Tarspraying of roads within the Borough. BE, Town Hall, Sale. Dep. £2 2s.

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MAY 26.

Wigston UDC.—Roads and sewers on Lansdowne estate, South Wigston. Pick, Everard, Keay and Gimson, engineers, 6, Millstone-la., Leicester. Dep. £2 2s.

MAY 29.

St. Helens CBC.—About 22,900 sq. yds. asphalt on main roads. BE. Dep. £2 2s.

MAY 31.

Wallingford RDC.—Cholsey sewerage and sewage disposal. T. G. Faulkner, engineer, 41, Wantage-rd., Didcot, Berks. Dep. £5 5s.

GENERAL BUILDING WORK

(LONDON)

Camberwell.—FLATS.—21 small sites in Peckham and Nunhead are to be used by BC for building blocks of six flats. The building will be done by direct labour and each block will cost over £12,000. There will be three blocks in St. Mary's-rd., two blocks in Stanbury-rd., two in Bidwell-st., two in Brayards-rd. and three in Naylor-rd. Single blocks will be erected in Copeland-rd., Woods-rd., Sunwell-rd., Consort-rd., Lindengr., Hanover-park, Carlton-pl., Whorlton-rd. and Friary-rd.

Friern Barnet.—HOUSES.—TP permission has been given to proposals by Matthew James & Co., Ltd., bldrs., Weir Hall Estate, N18, for the erection of four houses at the site of "Melrose," 76, Friern Barnet-la., N11.

Friern Barnet.—HOUSING.—The erection of four houses on land at the Torrington Park junction of Friern Barnet-la. has been proposed by G. F. Randall, Ltd., bldrs., 219, Woodhouse-rd., N12. TP permission has been granted.

Lambeth.—FLATS.—Plans for the provision of 82 flats have been prepared by Mr. Alister MacDonald, FRIBA, Aldine House, 10-13, Bedford-st., WC2, for the Church Army Housing Society, 55, Bryanston-st., W1. Approval has been given by BC.

Lewisham.—SITE ACQUISITION.—LCC Hsg. Com. propose the acquisition for housing purposes of a site of about three acres in Ravensbourne-ave. About 58 dwellings could be built on the site. The estimated cost of acquiring, clearing and partially redeveloping the site for housing purposes is £5,500. Compulsory purchase may be required.

Paddington.—PRIMARY SCHOOL.—LCC Ed. Com. have approved a site for the new St. John's Wood R.C. primary school in Sutherland-ave., Randolph-ave. and Lanark-rd. As a first stage the school will be built on part of the site, leaving the remainder for development later. The estimated cost of the site acquisition, site works and incidental expenses is £27,800.

Shoreditch.—COLLEGE EXTENSIONS.—The governors have submitted a scheme, which LCC Ed. Com. have approved, for adaptations and an extension to Cordwainers technical college, consisting of a three-storey block connected by a two-storey block to the present building. The estimated cost is £87,514, including £10,074 for fees and incidental expenses. The project has been included in the educational building programme for 1954-55.

Westminster.—MODERNISATION SCHEME.—Hsg. Com. hope in near future to commence a modernisation scheme dealing first with Norfolk House, then Probyn and Jessel houses. They have approved sketch plans prepared by the Director of Housing in consultation with MH&LG for converting Norfolk House into 90 self-contained flats. Com. asked the Director of Housing to proceed with the preparation of detailed drawings, specification and bills of quantity. City C was asked to approve a recommendation that Drower & Son, 28, Victoria-st., be appointed quantity surveyors for the modernisation of Norfolk House.

Woolwich.—SITE ACQUISITION.—Hsg. Com. have authorised TC to negotiate with the Royal Arsenal Co-operative Society, Ltd., for the acquisition of four acres of land on the Bostall estate at present leased by the Council for temporary housing purposes. The negotiations have also included certain additional land owned by the society, contiguous to the temporary housing sites and at present occupied by wooden hutments. The land is situated in Openshaw-rd., McLeod-rd., Violaave., Dahlia-rd., Fuchsia-st., Bostall-la. and Commonwealth-way, and comprises a total area of 15 acres.

Woolwich.—SPECIAL SCHOOL.—LCC Ed. Com. propose that the erection of a school for educationally sub-normal children at the 7¼-acre Rose Cottage site be included in the 1955-56 building programme. This school, for which the preliminary estimate is £67,000, is to rehouse Vanbrugh primary mixed school and provide 180 places for primary and secondary pupils of both sexes.

Woolwich.—LUXURY CINEMA.—MOW have granted a £37,750 licence to Associated British Cinemas, Ltd., 30, Golden-sq., W1, for the completion of a 2,000-seat luxury cinema on the site of the former Grand Theatre next to the Town Hall.

(PROVINCIAL)

Abram.—UDC propose further 20 houses at Bickershaw estate. Architects, J. C. Prestwich & Sons, Bradshawgate-chbrs., Leigh, Lancs.

Accrington.—MoW propose erection of new employment exchange at Water-st./Melbourne-st. Work will commence shortly.

Bakewell.—UDC propose erection of 88 houses and three shops on portion of Burton-cl. estate.

Barrow-in-Furness.—BC propose extensions and adaptations to cty. gram. sch. for girls, £140,250 est.

Bedlington.—UDC endeavouring to purchase 20 acres land for proposed sports stadium and communal centre; and is to erect 280 houses at Morpeth-rd. Council has its own direct labour organisation.

Blackpool.—EC approved in principle plans for extensions to Roseacre Primary School, £7,000 est. To appoint private architect to prepare plans for proposed Hawes Side Primary School. B.C. to invite tenders for 59 dwellings at Grange Park Extension, 200 dwellings at Grange Park and 84 at Mereside.

Blackpool.—Plans submitted to BC:—Nine houses and garages at junction Newton-dr./Deneway-ave., for J & R. Baden Barnes, 123, Church-st.; erection of Sunday-sch. at St. Christopher's Church, Hawes Side-la., for A. N. Thompson, 52, Towneley-ave.; seven houses and six garages at Mansfield-rd., for R. Fielding & Son, Stanhope-rd. Works.

Blyth.—TC received provisional approval for sports centre in town, est. cost £30,000. BS, J. Forster.

Brighton.—St. Joseph's (RC) School Managers authorised to proceed with first instalment of three classrooms of their new school.

Brighton.—TC to build police houses on sites on Woodingdean and Craven Vale estates.

Brighton.—TC to purchase Norton Farm, which is being developed for housing purposes, 8 to 12 dwellings to be erected.

Burnley.—BC propose new crematorium. Architects, Taylor & Young, 195, Oxford-rd., Manchester.

Carlisle.—TC to negotiate with Direct Labour Dept. for erection of 80 houses at Harraby; with A. S. Nixon, Ltd., 83, Lowther-st., for erection of 10 houses; and with H. V. England, Old Meldrum, Alton-st., for erection of 10 houses, plans also considered for another 91 houses. Council's A, F. Bowman, Estate Office, Birtley.

Colne.—TC approved layout for 14 dwellings at Wilmore-cl. and 3-storey block of flats at Rook-st./Church Meadows site.

Darlington.—Richardson & Shaw, 3, Skinnergate, prepared plans for proposed recreation centre at Neasham-rd., for Cleveland Bridge and Engineering Co., Ltd. No contracts let.

Darlington.—Plans approved for six houses in Baydale-rd., for Bussey & Armstrong, builders, Brinkburn-rd., Darlington.—Whessoe, Ltd., to erect repair shop, offices, oil store and other premises in Dodsworth-st., Darlington.

Darlington.—TC approved plans for works extensions for Darlington and Simpson Rolling Mills, Ltd., and factory additions in West Auckland-rd., for Chemical & Insulating Co., Ltd.

Derby.—BC to invite tenders for erection of flats at Siddals-rd.

Dewsbury.—BC approved plans: 10 bungalows at Wrexhall-rd. and Patterdale-rd., for G. Richardson & Sons; offices at Manorcroft Dairy, Old Bank-rd., for Express Dairy (Northern), Ltd.; mechanical coal handling plant at Combs Colliery, for National Coal Board.

Drayton.—RDC to invite tenders for 22 houses at Hodnet, four at Moreton Wood, two at Cheswardine and two at Willesden-rd., Calverhall.

Dudley.—EC seek loan for erection of gymnasium, chemistry laboratory and art room at Dudley Teachers' Training College.—TC to prepare plans for erection of aged persons' bungalows at Newland-gr., Holly Hall.

Dudley.—EC to invite tenders from selected contractors for extensions to Wrens Nest School.

Dukinfield.—BC to erect further 32 houses at Yew Tree-la. site. Architects, Cruickshank & Seward, 196, Deansgate, Manchester.

Durham.—Crook and Willington UDC to develop six-acre site at Hunwick for housing. Plans by T. A. Page, Son & Hill, 75, King-st., South Shields.

Ellesmere Port.—Foundation stone recently laid for erection of Pooltown Methodist Church at Rossmore-rd. West, for Methodist Auth., £11,000 est.

Gateshead.—Hsg. Com. propose 10-storey flats on Barnes-cl. site. The flats will total 196 dwellings, cost aout £500,000.

Halesowen.—Marion Florence Knitwear, Ltd., propose new manufacturing premises at 13/14, Islington. Architect, T. S. Beach, Halesowen. (Inquiry held.)

Heald Green (nr. Stockport).—PC Council of St. Catherines Church propose erection of a new church, £16,000. Architect, F. W. Nicholson, Liverpool.

Heanor (Derbys).—Plans submitted to UDC: New employment exchange for MOW; alterations to "Railway Tavern," Station-rd., Langley Mill, for Home Brewery Co., Ltd.

Hebburn-on-Tyne.—Licence granted for building of cinema in Victoria-rd., for Dawe Bros., Newcastle. Plans by Stephenson & Gillis, Saville Chambers, North-st., Newcastle-on-Tyne.

Hexham.—RDC approved plans by Northumberland County A, County Hall, Newcastle-on-Tyne, for police house at Acomb and two at Birches Nook, Stocksfield.

Hexham.—RDC selected site of old Bush Inn for erection of new council offices and council chamber, est. cost £22,000.

Houghton-le-Spring.—J. M. Angus, A, 21, Lovaine-pl., Newcastle-on-Tyne, on behalf of Philadelphia and New Herrington Comrades' Club, approached UDC regarding site for club premises.—UDC agreed to purchase site near Edwin-st., for erection of highways depot.—Council plan houses on vacant sites in Newbottle Ward.

Hyde.—Plans submitted to BC:—Alterations to the "Red Lion" Inn, Manchester-rd., for Openshaw Brewery Co., Ltd., Manchester; 22 houses at Fawley-ave., for William Norgrove & Sons, Ltd., Hyde.

Jarrow.—MH&LG approved estimates to build 60 houses at South Leam-la.

Jarrow-on-Tyne.—MH&LG confirmed TC's slum clearance plans for Queen's-rd. area.

Leigh.—TC considering erection of new Central Library.

Lincolnshire.—Min. approval sought by Kesteven Ed. Comm. for inclusion in 1954-55 programme of additional accommodation at King's School, Grantham (£50,000); additions to Kesteven and Grantham Girls' School (£55,000); also, for 1955-56 programme: primary school, Stamford (£26,000); primary school, Scopwick (£25,696); secondary schools at Stamford (£138,000) and Market Deeping (£59,125). Extensions to Stubton Hall School for sub-normal children (£58,000); modifications to sick bay, Kesteven Training College (£10,000); extensions to Grantham Technical College (£127,000); completion of Robert Pattinson Secondary School, North Hykeham (£70,000).

Liverpool.—Post-war Redevelopment Com. recommend for City C. approval acquisition of following sites: 24-28, Lord-st., 34-38, Lord-st., and 2-8, South John-st., 10-18a, South John-st., and 27-29, Cable-st., and 19, Cable-st., for lease to Unicos Property Corporation, Ltd., to develop within two years by erection of offices and shops. Also recommend use of site in Wavertree Park for new helicopter station. City E&S submitted plans for multi-storey car park building in Tithebarn-st., est. cost £266,000. H. T. Hough, City E&S.

Lymm.—British Legion propose erection of new headquarters.

Mansfield.—National Coal Board propose extensions to Rufford Colliery Baths.—BC approved plans for workshops, stores and office accommodation at Moor-la., for E. C. Rippon, Ltd.

Mansfield.—Mansfield Brewery Co., Ltd., propose erection of licensed premises on Ladybrook estate.

Middlesbrough.—Thomas Mouget (Contractors), Ltd., 24, Cornfield-rd., approached TC regarding site for erection of depot consisting of building for 20 to 30 lorries, repair shop, office accommodation and living accommodation for staff.—TC to erect 526 houses on Pallister Park housing site to plans by J. L. Kenyon, BE, Municipal-bldgs.

Middleton.—BC approved plans, knitting factory at Green-st. East, for Townley Knitting Co., Ltd., Townley-st., Middleton.

Newburn-on-Tyne.—UDC approved plans by their S, J. A. Weatherley, for 11 bungalows for old people.

Newcastle-on-Tyne.—Thomas Hedley & Co., Ltd., City-rd., to erect process building, and prepared their own plans.—J. Moffett, Cheviot-view, Ponteland, prepared plans for showroom at High Level Approach.—Layout plans prepared by City A, for flats and maisonettes in Elswick-st. and Elswick-row, for City C.

Newcastle-on-Tyne.—City C having plans prepared for extensions to the aerodrome at Woolsington, est. cost £120,000. Plans include permanent terminal buildings, passenger and customs accommodation and restaurant. City A, G. Kenyon, 18, Cloth-market, Newcastle.

Newcastle-on-Tyne.—J. Walton Taylor & Son, Gallowgate, architects for three shops and two flats in Broadway-rd., for A. Eblett.

Newton Aycliffe.—Contract expected to be let within few weeks for proposed licensed premises near Neville-parade, for J. W. Cameron & Co., Lion Brewery, West Hartlepool. Architect, E. M. Lawson, Barras-bldgs., Barras Bridge, Newcastle-on-Tyne.

Oswestry.—RDC propose new Council Chamber.

Rawtenstall.—BC propose extensions to Town Hall, £13,500 est. Plans by S.

Runcorn.—UDC approved plans: Brine treatment plant and amenity building off Heath-rd. South, for ICI, Ltd.

Salford.—PC Council of St. Ambroses, Liverpool-st., Pendleton, propose rebuilding church premises.

Salford.—Groves & Whitnalls, Ltd., received licence for rebuilding of bottling factory.

Sheffield.—MOW propose extensions to Head Post Office at Pond Hill, Pond-st. and Flat-st.

Skelmersdale.—UDC S prepared plans for blocks of 10 dwellings at Manor House Estate.

Skelton and Brotton.—18 houses to be built at Brotton by UDC. Plans by S, Council Offices, Skelton-in-Cleveland.

South Shields.—TC made renewed application to carry out £29,000 scheme for additions to Corpn. transport depot.

South Shields.—TC urged by Town Improvement Com. to enter into agreement with Ravenseft Properties, Ltd., London, for erection of block of shops on Crofton's site in Market-pl. Firm's architects, L. H. Fewster & Partners, 22, Conduit-st., London, W1.—TC to develop the town as seaside resort by provision of row of shops, Swiss chalet village and conference and concert hall. Boro' E, John Reid, Town Hall, South Shields.—BC received Government approval for extensions to Town Hall.

Stafford.—J. Gough Noake, Ltd., 48, Darlington-st., Wolverhampton, propose erection of premises at Gaol-rd. Architects, Doffman & Leach, Tenterbanks, Stafford.

Staffs.—EC propose four new schs. in Rowley Regis and Brierley Hill areas in 1955 programme, £160,000 est.

Stockton-on-Tees.—TC approved in principle erection of 3,500 houses on Hardwick estate and planning permission being sought.—TC received loan sanction £87,010 for building 68 houses at Portrack.—TC approved revised plans by Kitching & Co., 21, Albert-rd., Middlesbrough, for proposed hotel in Ragworth-la., for Beverley Bros.—North-Eastern Elec. Brd., Thornaby, to erect transport depot and sub-station in Boathouse-la., Stockton.—F. W. Turnbull, Whitehouse, Carlton, prepared plans for commercial garage on Dog Hill Farm estate, for A. Bell.—TC to negotiate price with G. Wimpey & Co., Ltd., Orchard House, Newcastle-on-Tyne, for erection of 110 houses at Newham Grange. T. C. Hartley, 28, The-square, Stockton, is Boro' A.—BC approved first stage of municipal buildings scheme, est. cost £150,000.

Stoke-on-Trent.—Governors of North Staffs Tech. College instructed City A to prepare plans for extensions to Tech. College, £249,000 est. Work to commence in January.

Stretford.—BC approved following plans:—Storage and process building, Trafford Park-rd., for Schori Metallising Process, Ltd.; Bacon warehouse, smoke houses, offices and garage, sites of 336 to 340 (inc.), Chester-rd., for H. Beattie; erection of CoE, Nartonrd., for Rector and Wardens, All Saints; 17 houses, Chapel-la./Barton-rd., for H. Hampson; printing shop, Park-rd./Barton Dock-rd., for Kellogg Co. of Great Britain, Ltd.

Sunderland.—TC approved in principle, schemes for new civic hall and public baths, new civic centre at West Park, swimming baths to serve housing estates and a coast protection scheme at Hendon. Total cost £1m.

Sutton Coldfield.—BC to negotiate contract with A. E. Jones, 37, Hansons Bridge-rd., Birmingham, for erection of six houses at Cottage-la., Minworth.—Plans submitted to BC:—Six houses at Butlers-la., for E. F. Scott, Ltd., 21, Holland-st.; 52 houses and garages at Quespett-rd. East, for J. Poole & Co., Ltd.

Thetford (Norfolk).—BC approved proposals that ten acres of land are to be made available for development as sites for light industries.

Towcester.—Northants EC propose new CP sch. in 1955 programme.

Tow Law.—UDC to build six aged people's bungalows on Attlee Estate, and to invite North-East Housing Association, Metrovick House, Northumberland-rd., Newcastle-on-Tyne, to erect them.

Tursdale.—Central training establishment for all phases of mine work to be built at Tursdale Colliery, Co. Durham, by NCB.

Tynemouth.—Plans are being prepared by W. Stockdale, 73, Howard-st., North Shields, for reconstructing motor repair shop in Coach-la., for G. Davidson & Son.—TC obtaining tenders for civil defence garage at Billy Mill-ave., Chirton.—TC to obtain tenders for building sea-wall at King Edward's Bay. Plans by RE, 16, Northumberland-sq., North Shields.

Washington (Co. Durham).—UDC S to prepare detailed plans and estimates for block of shops and flats at Washington Station.

West Riding.—CC appointed Professor R. H. Matthew, Edinburgh University, as architect for proposed Swinton sec. mod. sch., near Mexborough, £135,000 est.

Whitley Bay.—Plans approved for rebuilding of Masonic Hall in Norham-rd. Architect, William Stockdale, 73, Howard-st., North Shields.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Aberdeenshire.—Erection of a new medium-power television stn. on the Corehill site at Oldmeldrum (Meldrum Station): *Alexander Hall & Son, Ltd., Aberdeen.

Bakewell.—14 houses at Stoney-cl., for UDC: *Furniss & Hassall, Station-rd., Great Longstone, £19,877.

Ballymena.—Erection of 24 houses and construction of site works at Groggan, Randelstown, Co., Antrim, for RDC: *David McKeown, 7-9, Galgorm-rd., Ballymena, £28,236.

Ballymena.—Extensions to the sewer and water main at Shielstown-rd., Ahoghill, Co. Antrim, for RDC: *Ramsey Bros., "Clintagh," Broughshane, £1,933.

Bellshill.—Erection of 116 houses on the East Parkhead housing site, for Lanarkshire CC. Samuel MacColl (A), Housing A, County-bldgs., Beckford-st., Hamilton West. General contractors and tender: *Andrew Wright & Sons, Ltd., Blantyre Contracting Works, Old Blantyre, £161,024.

Berkshire.—Erection of the first instalment of the East Berks College of Further Education, Windsor branch, for CC: *W. E. Chivers & Sons, Ltd., £48,898.

Bletchley.—Factory No. 2, industrial estate, for UDC. Architects, Mayell, Webb & Hart, 118, Cromwell-rd., SW5. Quantities by T. C. Hadland, Northampton:—

Adkins & Shaw, Ltd.	£48,818
Rowley Bros., Ltd.	43,576
C. E. Ivens & Son, Ltd.	42,750
Lindrum (Lincoln), Ltd.	42,250
Thos. Lowe & Son	41,881
C. F. Kearley, Ltd.	41,844
Simcock & Usher, Ltd.	40,784
Donald Lockhart, Ltd.	40,200
*Drabble Construction, Ltd., 104, Aylesbury-st., Bletchley	38,496

Bootle.—Erection of cty. sec. sch. at Glovers-la., for EC: *Tysons (Contractors), Ltd., Dryden-st., Liverpool, £128,950. Erection of Copy-la. CP sch., Netherton: *Nor' West Construction Co., Ltd., Ruthven-rd., Liverpool, £48,500.

Carlisle.—Housing work for CC.—10 houses at Harraby: *A. S. Nixon, Ltd., Lowther-st., Carlisle; 10 houses at Harraby: *H. V. England, Alton-st., Carlisle; and 10 bungalows in Scalegate-rd.: *H. Cartner & Son, Hart-st., Carlisle.

Carlisle.—Erection of 45 bungalows at Harraby, for TC: *John Laing & Son, Ltd., Dalston-rd., Carlisle.

Caterham and Warlingham.—Erection of 14 dwellings at Hamsey Green estate for RDC: *W. J. Frewing, Ltd., £20,577 (amended figure).

Chester.—Erection of 142 dwellings at Blacon for TC: *Thomas Warrington & Sons, Ltd., £167,884.

Chorley.—100 houses at Liptrot Farm site, for TC: *Baxendale Bros. (Chorley), Ltd., £20,939 (17); *J. W. Lee, Ltd., Yarrow-rd. Sawmills, Chorley, £18,619 (15); *J. & H. Bullough, Ltd., Gordon-st., Chorley, £22,152 (18); *Wm. Townson & Sons, Ltd., Preston, £65,203 (50).

Clowne (Derbys).—Erection of a grocery shop at Ashlea Walk, for Clowne Co-operative Society, Ltd.: *B. G. Porter, Station-rd., Clowne, £6,375.

Cuckfield.—10 dwellings, Staplefield, for RDC: A. Hutchings, MBE, MIMunE, E&S: †W. C. Hilton, 137, Western-rd., Haywards Heath, Sussex, £13,269.

Durham.—Alterations and additions to Heighington Redworth Hall Special sch., for CC. Cty. A, G. R. Clayton, Court-la., Durham: *A. Neasham, Heighington, Co. Durham, £23,388.

Durham.—Improvements and general repairs to Evenwood CE (Controlled) sch., for CC. Cty. A, Court-la., Durham: *A. Neasham, Heighington, Co. Durham, £8,581.

Durham.—Adaptations to Windlestone Hall Special Residential sch., for CC. Cty. A, G. R. Clayton, Court-la., Durham: *F. W. Lazenby & Co., Ltd., Ferryhill, Co. Durham, £57,775.

Farnworth.—45 flats, Albert-rd., for BC. W. Gregson, AMIMunE, BE&S. Quantities by H. Place, FRICS: *W. Lionel Gray (1933), Ltd., Hospital-bldgs., Darley, Farnworth.

Halesowen.—Six houses at corner of Beecher-rd. and Parkside-rd., Cradley, for TC: *Five Oaks Estates, Castle Croft-la., Compton, Wolverhampton, £8,629.

Harlow (Essex).—Erection of Netteswell sec. mod. gram. sch.: *Kirk & Kirk, Ltd., 287, Upper Richmond-rd., SW15, £270,910.

Ilkeston.—12 bungalows on the Kirk Hallam estate, for BC. A. O. Marshall, MIMunE, MIStructE, FIAA, BE&S: *F. Sisson & Sons, Ltd., 32, Cromford-rd., Langley Hill, Notts, £13,862.

Islington.—98 flats at Dame-st., for MBC. E. C. P. Monson, F/ARIBA, Finsbury Pavement House, 120, Moorgate, EC2. Quantities by O. E. Parratt, FRICS, Adelaide House, London Bridge, EC4:—

Marples, Ridgway & Partners, Ltd., 2, Lygon-pl., Grosvenor-gdns., SW1	£237,712
Halse & Sons, Ltd., 5, Chapel-hill, SE18	233,310
The Unit Construction Co., Ltd., Faggs-rd., Feltham, Middlesex	228,288
J. S. Alderton & Co., Ltd., 264, Lavender-hill, SW11	221,343
Rowley Bros., Ltd., Power Works, Dunloe-ave., N17	219,942
*Gee, Walker & Slater, Ltd., 100, Park-la., W1	217,903

(Subject to the necessary consents.)

Jarrow-on-Tyne.—Erection of 68 dwellings on the southern part of the South Leam-la. estate, for TC: *Direct Labour.

Lanarkshire.—Erection of 68 houses at the Blairbeth housing site, for Rutherglen Corp. John C. Russel (F), Municipal-bldgs., Main-st., Rutherglen: *The Weir Housing Corp., Ltd., Calder, £131,737.

Lancs.—Following for EC:—Erection of phase 2 of Ashton-under-Lyne College of Further Education: *Unit Construction Co., Ltd., Knutsford, Cheshire. Phase 1 of Middleton Demesne cty. sch.: *E. Taylor & Co., Ltd., Ebor-rd. Sawmills, Littleborough, Lancs, £43,776. Erection of Kirkby Simonswood cty. inf. sch.: *Unit Construction Co., Ltd., Speke Boulevard, Liverpool, £44,026. Erection of Kirkby Park Brow cty. jun. & inf. sch.: *W. Tomkinson & Sons, Ltd., Great Newton-st., Liverpool, £35,295. Three additional classrooms at Thornton Cleveleys Beach-rd. CP sch.: *Brown & Jackson, Ltd., Elm-st., Fleetwood, £11,985.

Leatherhead.—Nine shops and five flats at Great Bookham, for UDC. John L. Davies, MBE. Quantities by W. J. F. Tillyard: *W. J. Aindow, 50, Oakway, Ashstead, £14,674.

Liverpool.—Work for TC: 16 maisonettes at Kent-sq., Liverpool, ‡Peak Construction Co., Ltd., 49, Hamilton-sq., Birkenhead, £32,878; 16 shops, 32 flats, branch post office, 22 garages, three maisonettes at Southdene, Kirkby, ‡Peak Construction Co., Ltd., £109,295; 18 demonstration houses at Dansie-st., Liverpool, ‡Peak Construction Co., Ltd., £28,140; 16 demonstration houses at Brownlow Hill, ‡Peak Construction Co., Ltd., £26,094; nine houses in Kendal-rd., *W. Church & Son, Reddish, £11,086 (after revision).

¶London (Air Ministry).—Contracts to value of £500 or over for week ended May 1:—

Building work: John Williams & Co. (Cornwall), Ltd., South-st., St. Austell, Cornwall. *Modifications to air-conditioning plant:* Benham & Sons, Ltd., 66, Wigmore-st., London, W1.

London (British Railways).—British Railways (London Midland Region) announce that the following contracts have been placed:—

Renewal of roof coverings with patent glazing at Dukinfield carriage and wagon works: *W. H. Heywood & Co., Ltd., Bayhall Works, Huddersfield. Claydigging and drainage on the down lines between 2 miles 1,345 yds. and 3 miles 166 yds. on the Banbury branch, former Great Central line: *Leonard Fairclough, Ltd., Terminal House, Grosvenor-gdns., London, SW1. Labour only for the cleaning and painting of Bury (Knowsley-st.) passenger and goods stns.: *G. & J. Seddon, Ltd., 55, Duke-st., Stoke-on-Trent. Painting of Reddish electric locomotive depot: *Arnold Sharrocks, Ltd., Spotland Bridge, Rochdale. Labour only for the cleaning and painting of Nelson, Rose-gr. and Oldham (Werneth) passenger stations: *Alfred Bagnall & Sons, Ltd., Shipley, Yorks. Labour only for the cleaning and painting of Manchester-rd. goods depot, Bolton: *Arundel (Contractors), Ltd., 70, Harris-st., Bradford.

LCC.—The undermentioned contracts exceeding £2,500 in value have been placed by LCC during the period ended April 30:—Reinstatement, etc., at Foxburrows Farm, Hainault Forest, *E. Doe & Sons (Contracts), Ltd., £5,345. Construction of four houses, 101 garages and other work at Becontree estate, Essex, *Haines & Warwick, Ltd., Seven Kings, £17,836. Layout of playing fields at Barn Elms Park, Surrey, *E. Doe & Sons (Contracts), Ltd., £59,781.

Painting works at the following schools: Wendell Park prim. and sec. schs., *Henry Smith & Son (Paddington), Ltd., £3,025. Southfields sec. sch., *C. M. Gorringe, Ltd., £5,105. Swaffield prim. sch., *Chas. Berger & Son, Ltd., £7,402. Sir Walter St. John's sch., *J. Garrett & Son, Ltd., £4,171. Sellincourt prim. sch., *Froom (Wimbledon), Ltd., £5,213. Rotherfield prim. sch., *W. J. Simms, Sons & Cooke, Ltd., £7,127. Plumcroft prim. sch., *E. Proctor & Sons, £2,779. Ivydale prim. sch., *R. J. Holland, Ltd., £6,259. Henry Thornton sch., *Triggs & Co., Ltd., £5,069. Hanover prim. sch., *H. Meckhonik, Ltd., £4,357. Goodrich prim. and Thomas Calton sec. schs., *Greenaway & Sons, Ltd., £8,610. Gallions Mount prim. sch., *Luckett & Sons, Ltd., £3,984. Franciscan prim. sch., *Froom (Wimbledon), Ltd., £4,729. Fircroft prim. sch., *W. J. Freeman, Ltd., £2,909. William Forster prim. sch., Norman Sinclair, Ltd., £4,122. Peterborough prim. sch., *Rawlings Bros., Ltd., £5,016. Pendragon prim. sch., *J. & C. Bowyer, Ltd., £2,667. Marvels-la. prim. sch., *Herbert Kennard, Ltd., £4,393. Loughborough sec. sch., *John Kent (London), Ltd., £2,883. Lena Gardens prim. sch., *Norman Sinclair, Ltd., £2,733. King's Highway prim. sch. and Wickham-la. sec. sch., *Halse & Sons, Ltd., £5,364. John Milton prim. sch., *Ernie Bayliss, Ltd., £3,119. John Burns prim. sch., *T. Ringham & Co., Ltd., £3,840. John Stainer prim. sch. and Thomas Wolsey sec. sch., *F. J. Oldham & Sons, £3,033. Alderbrook prim. sch. and Elmfield sec. annexe, *Howe & White, Ltd., £7,300. Ballamore prim. sch., *J. Smith (Chislehurst), Ltd., £2,702. Barrow Hill prim. sch., *C. Pitt & Son, Ltd., £5,941. Battersea sec. sch., *Sloggetts (Contractors), Ltd., £7,268. Christopher Hatton prim. sch., *M. & F. Frawley, Ltd., £6,202. Comber-gr. prim. sch., *Standage & Co., Ltd., £3,347. Culloden prim. sch., *S. C. Gover, Ltd., £4,161. Daniel sec. sch., *C. J. Manning (Builders), Ltd., £6,286. Drayton Park prim. sch., *W. V. Wall & Son, Ltd., £2,991. Durham Hill sec. sch., *Halse & Sons, Ltd., £4,251. Earlsfield prim. and sec. schs., *T. Ringham & Co., Ltd., £5,460. Effra prim. sch., *R. J. Holland, Ltd., £4,738. Kingsgate prim. sch., *E. J. Lacy & Co., Ltd., £4,581. Essendine prim. and sec. schs., *Charles Berger & Son, Ltd., £9,169. Lark Hall prim. sch., *W. & J. Freeman, Ltd., £3,012.

LCC.—Adaptation of the grandstand at Hurlingham Park, Fulham:—

George Newton & Hill, Ltd., Southwark	£16,000
W. Chapman & Sons, Ltd., Hammersmith	15,819
†W. H. Streeter, Ltd., Hampton	15,210

LCC.—Erection of a school at Larkhall-la. and Studley-rd., Stockwell, Lambeth, Vauxhall:—

Hall, Bedall & Co., Ltd., Lambeth	£114,430
A. Roberts & Co., Ltd., Westminster	111,344
Lavender, McMillan, Ltd., Worcester Park	110,620
J. Jarvis & Sons, Ltd., Westminster	109,872
M. J. Gleeson (Contractors), Ltd., Cheam	107,838
J. Garrett & Son, Ltd., Wandsworth	107,698
W. J. Marston & Son, Ltd., Fulham	106,701
J. M. Hill & Sons, Ltd., Wembley	103,733
*The Bunting Construction Co., Ltd., Lambeth	101,527

The architect's comparable estimate is £106,476.

LCC.—Erection of a cty. prim. sch. at Wimbledon Park Side, Wandsworth, Putney:—

E. Clarke & Sons (Addlestone), Ltd., Addlestone	£99,300
J. Garrett & Son, Ltd., Wandsworth	98,750
R. J. Rowley, Ltd., Tottenham	98,247
Thomas & Edge, Ltd., Woolwich	97,500
Rush & Tompkins, Ltd., Sidcup	95,575
C. P. Roberts & Co., Ltd., Holborn	91,790
The Bunting Construction Co., Ltd., Lambeth	91,754
M. J. Gleeson (Contractors), Ltd., Cheam	89,723
Rowley Bros., Ltd., Tottenham	87,669
*W. J. Simms, Sons & Cooke, Ltd., Westminster	87,181

The architect's comparable estimate is £87,380.

LCC.—Erection of an extension to Norwood technical college, Lambeth, Norwood:—

J. Jarvis & Sons, Ltd., Westminster	£75,119
Geo. Parker & Sons, Ltd., Peckham	74,564
M. J. Gleeson (Contractors), Ltd., Cheam	73,726
A. T. Rowley (London), Ltd., Tottenham	72,556
Thomas & Edge, Ltd., Woolwich	72,499
Rush & Tompkins, Ltd., Sidcup	71,235
E. H. Smith (Croydon), Ltd., Croydon	68,914
R. Mansell, Ltd., Croydon	68,607
*W. J. Cearns, Ltd., Stratford	67,513

The architect's comparable estimate is £69,822.

LCC.—Erection of a hostel at 90, Leigham Court-rd., Streatham, for use by Philippa Fawcett training college, Wandsworth, Streatham:—

Whyatt (Builders), Ltd., Streatham	£61,837
J. M. Hill & Sons, Ltd., Wembley	60,487
Grace & Marsh, Ltd., Croydon	59,856
J. Garrett & Sons, Ltd., Balham	59,546
Woodcock Bros. (Wimbledon), Ltd., Wimbledon	59,288
Truett & Steel, Ltd., Thornton Heath	58,853
Clarke, Barton & Co., Ltd., Belmont	58,549
Flowitt & Co., Ltd., Wimbledon	57,591
Siggs & Chapman, Ltd., Croydon	57,500
Bridge Walker, Ltd., Lambeth	57,499
*C. H. Gibson, Ltd., Croydon	56,090

The comparable estimate of Messrs. Hobday & Maynard, the architects responsible for the scheme, is £58,914.

¶London (MOW).—Contracts placed by MOW during week ended April 24:—

Cumberland: Post Office, Wesley-st., Workington, erection of engineering depot, joint garage and workshop, Gordon Durham & Co., Ltd., 57, Station-rd., Workington, Cumberland. *Lancashire:* HM Stationery Office, Broadway, Hollinwood, stripping and reslating roofs, Joseph Jackson (Oldham), Ltd., 36, Park-rd., Oldham. *Surrey:* Oxted, erection of telephone exchange, R. Durtnell & Sons, Ltd., Station-rd. East, Oxted, Surrey.

¶London (War Dept.).—Works contracts placed by WD during week ended April 24:—

Nottinghamshire: Building, Adam Eastwood & Sons, Ltd., Warsop. *Cumberland:* Roofing, The Neuchatel Asphalte Co., Ltd., Jarrow-on-Tyne. *Berkshire:* Road repairs, Western Trinidad Lake Asphalt Co., Ltd., Bristol 8. *Wiltshire:* Road repairs, Roads Reconstruction (1934), Ltd., Frome. *Hampshire:* Painting and decorating, F. Labbett & Sons, Nottingham. *Cornwall:* Painting and decorat-

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ing, F. Labbett & Sons, Nottingham. *Dorsetshire*: Building, Frank Wyatt & Son, Ltd., Poole.
Surrey: Painting and decorating, N. S. Long, Ltd., Poulton-le-Fylde; Roadworks, W. & J. Glossop, Ltd., London, SW18. *Essex*: Building, F. R. Hipperson & Son, Ltd., Dagenham. *London*: Painting, Fields, Ltd., London, SW1. *Berwickshire*: Miscellaneous, Berwick Building Co., Berwick-upon-Tweed; Drainage, John H. Pierce, Tweedmouth.

Maidenhead.—Extensions to the Thames Valley Traction Co. garage for the Tilling Association, Ltd. Architect, Alan A. Briggs, FRIBA, 10, Fleet-st., EC4: *J. M. Jones & Sons, Ltd., Maidenhead, £11,954.

Manchester.—Work for TC: 42 flats (contract 207), *H. Boot & Sons, Ltd., Manchester; 247 houses (contract 205), *H. Owen & Son, Ltd., Stockport; 147 houses (contract 206), *W. P. Mitchell, Ltd., Mobberley.

Mansfield.—13 houses at Ladybrook estate, for BC: *A. H. Smith (Builders), Ltd., Sutton-in-Ashfield, £15,911. Seven aged persons' bungalows at Bull Farm estate: *A. H. Smith (Builders), Ltd., £9,141.

Merioneth.—Erection of a new sec. sch. at Harlech for EC: *John Hughes (Contractors), Ltd., Wrexham, £167,043 (amended figure).

Middlesbrough.—Erection of 64 houses on the Park End housing site, for TC. BE, J. A. Kenyon: *Middlesbrough & District Building Trades Assoc., £85,577.

Newcastle.—Erection of ten houses in Benton-rd., Newcastle, at an est. cost of £28,000: *Haverys, Ltd., 28, Dunn-st., Newcastle-on-Tyne.

Newcastle-on-Tyne.—Brady & Martin, Ltd., wholesale and manufacturing chemists, Northumberland-rd., Newcastle-on-Tyne, are to build petroleum and chemical stores: *Stephen Easten, Ltd., Westgate Grange, Newcastle.

Newcastle-on-Tyne.—New offices in City-rd., for Marconi International Marine Communication Co., Ltd.: *Purdie, Lumsden, Ltd., Oxford-st., Newcastle.

Newcastle-on-Tyne.—Steelwork in connection with new premises in Hood-st., for A. J. Wares, Ltd., builders' merchants, South Shields: *R. Frazer & Sons, Hebburn-on-Tyne.

Newcastle-on-Tyne.—Construction of ambulance depot at Millers-rd., for City C. City A, G. Kenyon, 18, Cloth-market, Newcastle: ‡M. S. Failes, Ltd., 199, Coatsworth-rd., Gateshead, £15,526.

Newton Aycliffe.—Erection of sec. sch., for Durham CC. Cty. A, G. R. Clayton, Court-la., Durham: *G. Stephenson, Ltd., Chester-st., Bishop Auckland, £121,100.

Northampton.—Phase 1 of Technical high sch. at Trinity-ave., for EC: *A. Roberts & Co., Ltd., 79, Eccleston-sq., London, SW1, £59,200.

Northumberland.—Erection of child welfare clinic at Whitley Bay, for CC. Cty. A, C. C. Brown, County Hall, Newcastle-on-Tyne: *Castles, Ltd., Closefield-gr., Whitley Bay, £14,000.

Peterlee.—Proposed inf. and jun. sch., for Durham CC. Cty. A, G. R. Clayton, Court-la., Durham: *Leslie & Co., Woodlands-rd., Darlington, £145,502.

Rhos-on-Sea (N. Wales).—67 houses at Elwy estate, for Colwyn Bay TC: *Edward Jones, 3, The Arcade, Penmaenmawr.

Rowley Regis.—Extensions to the Rowley and Blackheath Labour Club: *A. Wright & Sons, Blackheath, £6,500 approx.

Rowley Regis.—Erection of a parochial hall for PCC: *J. Harper & Sons (Blackheath), Ltd., £12,130.

Salisbury.—Erection of a new NAAFI club in New-st.: *Lavender, McMillan, Ltd., Cheam, Surrey.

Scarborough.—Erection of Eastfield cty. mod. sch., for North Riding EC: *Plaxtons (Scarborough), Ltd., Seamer-rd., Scarborough, £97,500.

Sherborne.—Nine flats, for UDC. Petter, Warren & Roydon Cooper, architects, The Old Oxford Inn, West Hendford:—

Alford Bros., Hambridge, nr. Langport, Somerset	£15,690
E. G. Wilkins, Ltd., Marnhull, Dorset	14,871
R. Shillabeer & Sons, Yeovil	14,505
F. R. Bartlett, Ltd., Yeovil	14,223
C. P. Unwin & Sons, Ltd., Tiverton, Devon	13,964
*A. J. Stainer, Sherborne	13,048

Stockton-on-Tees.—Erection of 14 houses at Rosworth: *L. Brown & Sons, Boathouse-la., Stockton.

Stretford.—Nine houses at Kendal-rd., for BC: *W. Church & Son, Reddish, £10,836.

Swansea.—Erection of Roman Catholic Church for the Trustees at Morriston. Architect, Cyril A. Hughes, LRIBA, chartered architect and surveyor, 51, Walter-rd., Swansea. Quantity surveyor, B. W. Ellis, FRICS, 2, De la Beche-st., Swansea: *Bennett Bros. (Contractors), Ltd., Heathfield Works, Carlton-terr., Swansea.

Tynemouth.—Reconstruction of the toe wall at Percy-sq., for TC, in connection with sea defence works. Consulting engineer, N. Naschen, 58, Victoria-st., London, SW1: *Richard Costain, Ltd., London, £64,788.

Walsall.—58 houses at Irvine-rd., for TC: *Direct Labour, £76,324.

West Hartlepool.—Erection of eight shops, 10 maisonettes and seven houses in Owton Manor-la., for TC: *George Fordy & Son, Stockton-on-Tees.

West Riding.—Erection of new sec. mod. sch. at Crigglestone, for EC: *James Miller & Partners, Ltd., Newmillerdam, nr. Wakefield, £102,330.

Whitley Bay.—Alterations to Table Rocks bathing pool (£6,000) and further sea defence works at Brown's Bay (£26,480), for UDC. E. Roberts, S: *Direct Labour.

Widnes.—Additions at Simms Cross cty. sch., for EC: *T. Waring & Co., 15, Knowsley-rd., Ormskirk, £1,725.

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